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# Analysis of factors affecting adoption of agency banking among micro, small and medium sized enterprises in Nairobi County - a case study of Gikomba Market

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Analysis of Factors affecting Adoption of Agency Banking among Micro, Small and Medium Sized Enterprises in Nairobi County.

A case study of Gikomba Market

Joyce Emmah Nabwire Mukhule



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Enterprises in Nairobi County.  
A case study of Gikomba Market

Joyce Emmah Nabwire Mukhule

Submitted in partial fulfilment of the requirements for the Degree of Masters of Commerce at  
Strathmore University.

Strathmore University Business School (SUBS)  
Strathmore University  
Nairobi, Kenya  
(May, 2019)



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**Joyce Emmah Nabwire Mukhule**

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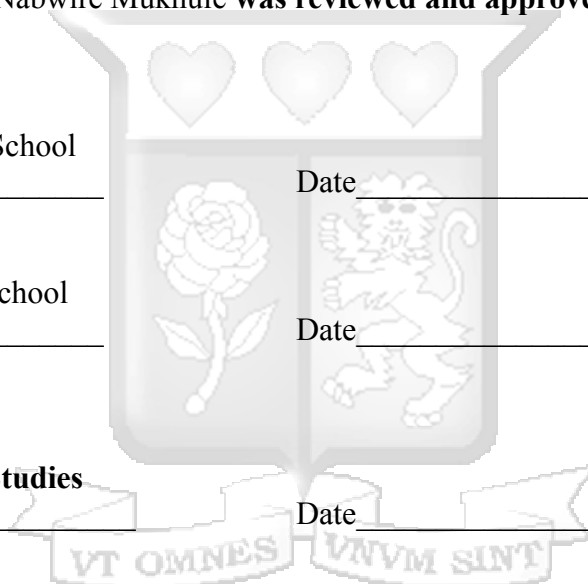
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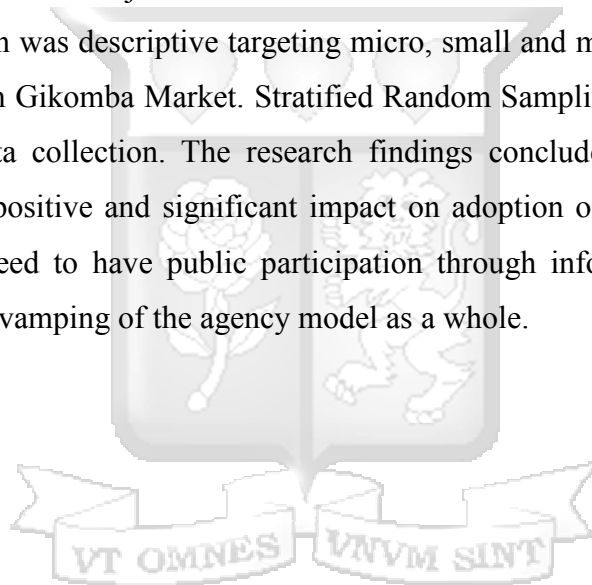
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## **Abstract.**

Agency banking as a comparatively new model in Kenya has attracted attention from researchers due of the contribution it has towards financial inclusion. Lack of adequate finances has been identified as one of the challenges faced by MSMEs. Agency banking as an innovation seeks to mitigate the aspect of financial inclusion by taking banking services, which include but are not limited to provision of finance close to the customer. However, it is not conclusive as to what factors influence adoption of agency banking among potential customers. This led to the need to analyse possible factors that would affect adoption of agency banking. The first objective set out to analyse how perception influences adoption of agency banking whereas the second objective looked at social influence as a factor affecting adoption of agency banking. The research was descriptive targeting micro, small and medium enterprises in Nairobi County with special focus on Gikomba Market. Stratified Random Sampling was used and a structured questionnaire applied in data collection. The research findings concluded that social influence and perceived usefulness had a positive and significant impact on adoption of agency banking. The study recommends that there is need to have public participation through informative sessions as well as aggressive advertising and revamping of the agency model as a whole.



## Contents

Abstract.....	ii
Contents .....	iii
List of Figures.....	vi
List of Tables .....	vii
List of Abbreviations .....	viii
Definition of Terms .....	x
CHAPTER ONE: INTRODUCTION .....	11
1.1 Introduction .....	11
1.2 Background of the Study. ....	11
1.4 Objectives of the Study.....	15
1.4.1 General Objective .....	15
To analyse the factors influencing the adoption of Agency Banking among MSMEs in Nairobi County. ....	15
1.4.2 Specific Objectives.....	15
1.5 Research Questions. ....	15
1.6 Scope of Study .....	16
1.7 Significance of the Study .....	16
CHAPTER TWO: LITERATURE REVIEW .....	11
2.1 Introduction .....	18
2.2 Theoretical Framework.....	18
2.2.1 Diffusion of Innovation theory .....	18
2.2.2 Technology Acceptance Model.....	19
2.3 Empirical Review.....	20
2.3.1 Perceived ease of use. ....	21
2.3.2 Perceived Usefulness.....	22
2.3.3 Perceived Risk. ....	23
2.3.4 Social Influence.....	24
2.4 Research Gap .....	25
2.5 Conceptual Framework .....	25
<b>Figure 2.1 Conceptual Framework.</b> .....	26
Source, Author (2019) .....	26
2.6 Operationalization of the Variables.....	26
Table 2.1 Operationalization of the Variables.....	27
CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY .....	18
3.1 Introduction.....	29
3.2 Research Philosophy.....	29
3.3 Research Design.....	29
3.4 Population of the Study.....	30
Table 3.1 Study Population.....	30
3.5 Sample Size.....	30
3.6 Sampling Design .....	31
Table 3.2 Sample Population. ....	32
3.7 Data Collection Instruments.....	32
3.7.1 Validity of Instrument .....	32

3.7.2 Pilot testing of instrument.....	33
3.8 Data Analysis Techniques.....	33
3.8.1 Testing the Model.....	34
3.9 Research Quality.....	35
3.9.1 Validity.....	35
3.9.2 Reliability.....	35
Table 3.3 Cronbach's Alpha Index and KMO .....	36
3.10 Ethical Considerations. ....	36
CHAPTER FOUR: RESEARCH FINDINGS AND PRESENTATION .....	29
4.1. Introduction.....	38
4.2 Demographic Characteristics.....	38
Table 4.1 Response Rate.....	39
Table 4.2 Demographic Characteristics.....	39
4.3 Descriptive Statistics.....	40
4.3.1 Agency banking Adoption.....	40
Table 4.3 Adoption of usage of agency banking.....	40
From the table 4.3, it is safe to conclude majority of the respondents consider adopting agency banking if the technology is practical and will be used to pay bills and other businesspersons, is easy to conduct payments and bank transactions and offers convenience in terms of goods payment.....	41
4.3.2 Relationship between perception and Agency Banking.....	41
Table 4.4 Perceived Usefulness of Agency Banking.....	41
Table 4.5 Perceived ease of use and agency banking.....	42
Table 4.6 Perceived Risk and Agency Banking.....	43
4.3.3 Relationship between Social influence and Adoption of Agency Banking .....	43
Table 4.7 Social influence and Adoption of Agency Banking.....	43
4.4 Diagnostics tests .....	44
4.5 Factors influencing adoption of agency banking.....	45
Pearson's Correlation Analysis.....	45
Table 4.8 Pearson's Correlation Analysis.....	46
4.5.1 Regression Analysis.....	47
4.5.1.1 Perceived usefulness and its effect on adoption of agency banking by micro, small and medium sized enterprises in Nairobi County.....	47
Table 4.9 Effect of Perceived Usefulness .....	48
4.5.1.2 How perceived risk of agency banking affects its adoption by micro, small and medium sized traders in Nairobi County.....	49
Table 4.10 Effect of Perceived Risk .....	49
4.5.1.3 How perceived ease of use affects adoption of Agency Banking by micro, small and medium sized traders in Nairobi County.....	50
Table 4.11 Effect of Perceived Ease of Use.....	51
4.5.1.4 How social influence affects the adoption of agency banking by micro, small and medium sized traders in Nairobi County.....	52
Table 4.12 Effect of Social Influence .....	52
4.5.1.6 Overall regression model.....	53
Table 4.13 Regression Model Summary.....	54
4.6 Summary of the Regression models .....	55
Table 4.14 Summary of results.....	55
4.7 Conclusion .....	55
CHAPTER FIVE: DISCUSSIONS CONCLUSIONS AND RECOMMENDATIONS .....	38

5.1 Introduction .....	57
5.2 Discussions.....	57
5.2.1 Ease of Use of Agency Banking .....	57
5.2.2 Perceived usefulness of Agency Banking.....	58
5.2.3 Perceived Risk and Agency Banking.....	58
5.2.4 Effect on the customer's social influence .....	59
5.3 Conclusions.....	59
5.4 Recommendations.....	60
5.5 Limitations of the study.....	61
5.6 Areas for further study .....	62
REFERENCES.....	63
Appendix I: Introduction Letter.....	69
REF: RESEARCH QUESTIONNAIRE .....	69
Appendix II: Questionnaire.....	70
Thank you for your participation.....	76
Appendix III: List of Figures.....	77
<b>Figure 2: Stages of adoption in the DOI theory</b> .....	77
<b>Figure 3. Diffusion of Innovations Theory.</b> .....	77
<b>Figure 4. Technology Acceptance Model</b> .....	77
Appendix IV: Diagnostic Tests Output .....	78
1. Test for Heteroscedasticity .....	78
Table 4.15 Lagrange Multiplier .....	78
Table 4.16 Durbin Watson Test for Autocorrelation .....	79
Table 4.17 VIF and Tolerance level.....	79
Appendix VI: ANOVA (Analysis of Variance) .....	80
Appendix VII: Multiple Regressions to improve model results .....	81
Appendix VIII: Regression Coefficients .....	83
Table illustrating Regression Coefficient-Perceived Usefulness.....	83
Table illustrating Regression Coefficient-Perceived Ease of Use .....	83
Table illustrating Regression Coefficient-Perceived Risk .....	83
Table illustrating Regression Coefficient-Social Influence .....	84
Table illustrating Regression Coefficient-Overall Equation.....	84



## List of Figures.

Figure 2.1 Conceptual Framework.....	19
Figure 3 Stages of Adoption in the DOI theory.....	71
Figure 4 Diffusion of Innovations Theory.....	71
Figure 5 Technology Acceptance Model.....	71

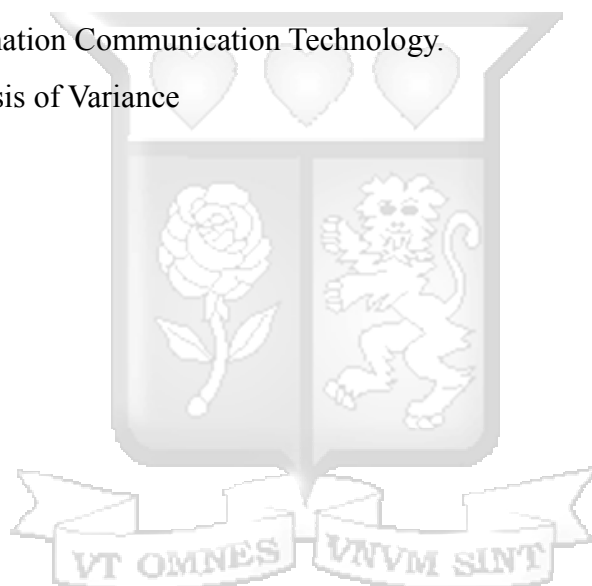


## List of Tables

Table 2.1 Operationalization of the Variables.....	27
Table 3.1 Study Population.....	30
Table 3.2 Sample Population.....	32
Table 3.3 Cronbach's Alpha Index and KMO .....	36
Table 4.1 Response Rate.....	39
Table 4.2 Demographic Characteristics.....	39
Table 4.3 Adoption of usage of agency banking.....	40
Table 4.4 Perceived Usefulness of Agency Banking.....	41
Table 4.5 Perceived ease of use and agency banking.....	42
Table 4.6 Perceived Risk and Agency Banking.....	43
Table 4.7 Social influence and Adoption of Agency Banking.....	43
Table 4.8 Pearson's Correlation Analysis.....	46
Table 4.9 Effect of Perceived Usefulness.....	48
Table 4.10 Effect of Perceived Risk .....	49
Table 4.11 Effect of Perceived Ease of Use.....	51
Table 4.12 Effect of Social Influence .....	52
Table 4.13 Regression Model Summary.....	54
Table 4.14 Summary of results.....	55
Table 4.15 Lagrange Multiplier.....	78
Table 4.16 Durbin Watson Test for Autocorrelation.....	79
Table 4.17 VIF and Tolerance level.....	79
Table illustrating Regression Coefficient-Perceived Usefulness.....	83
Table illustrating Regression Coefficient-Perceived Ease of Use .....	83
Table illustrating Regression Coefficient-Perceived Risk.....	83
Table illustrating Regression Coefficient-Social Influence.....	84
Table illustrating Regression Coefficient-Overall Equation.....	84

## List of Abbreviations

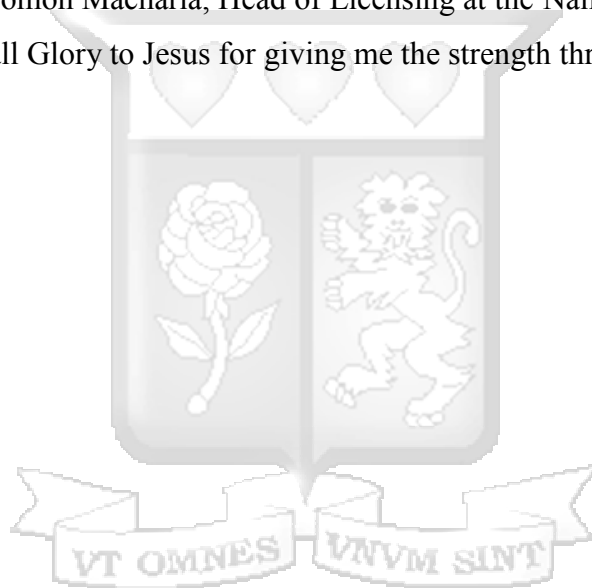
<b>AB:</b>	Agency Banking
<b>MSMEs:</b>	Micro, Small and Medium Enterprises.
<b>SPSS:</b>	Statistical Package for Social Sciences.
<b>ATM:</b>	Automated Teller Machine.
<b>CBK:</b>	Central Bank of Kenya.
<b>KNBS:</b>	Kenya National Bureau of Statistics.
<b>TAM:</b>	Technological Acceptance Model
<b>DIT:</b>	Diffusion of Innovation Theory.
<b>ICT:</b>	Information Communication Technology.
<b>ANOVA:</b>	Analysis of Variance



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To the respondents at Gikomba Market who were not only willing but also equally eager to see a change in the formulation of technologically oriented products that would suite the nature of their daily businesses. Lastly, to Mr. Solomon Macharia, Head of Licensing at the Nairobi City County for assisting with required data. Overall, all Glory to Jesus for giving me the strength through the tides and the storms until completion.



## Definition of Terms

<b>Commercial Bank:</b>	A financial institution dealing with money. It accepts deposits of money from the public to keep in its custody for safety (Somashekar, 2009).
<b>Banking:</b>	An industry that handles financial services. These services range from lending to management of financial resources.
<b>Agency banking:</b>	Provision of limited functions of a commercial bank and financial services to people through use of third parties.
<b>Relative advantage:</b>	The degree to which an innovation is perceived as providing more benefits than its predecessor (More & Benbasat, 1991)
<b>Innovation:</b>	An idea, object or practice that is perceived as new by members of the social system (Okiro & Ndungu, 2013).
<b>Technological Innovation:</b>	A process of introducing new ideas, methods or devices, which are science, technology and system based (Letangule & Letting, 2012).
<b>Innovation Diffusion:</b>	Communicating innovation through certain channels over time among members of social systems (Okiro & Ndungu, 2013).
<b>Adoption:</b>	A process where an individual or other decision making unit passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision (Kundu & Roy, 2010).

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Introduction**

Chapter one gives an overview of the background of study. The problem statement was elaborated as well as the objectives under study. It equally outlines the research questions that the study was meant to address as well as the scope and relevance.

### **1.2 Background of the Study.**

Innovation has had a hand in the changes been experienced in the financial sector. Innovations linked to mobility such as use of wireless devices have changed how businesses are being conducted between commercial banks and its clientele (Lule, Omwasa & Mwololo, 2012). Of key reference is the fact that there has been less stability in the financial sector giving commercial banks an opportunity to mitigate the challenges being experienced through adoption of new strategies with emphasis on meeting customer satisfaction by offering competitive products and services geared to meet demands as well as minimize costs (Sohail & Shanmugham 2013).

The facets outlined above with no doubt influence development of the retail sector, which has masses in terms of customer focus (Lang, 2014). Retail banking is a viable option when it comes to creating a competitive edge in the banking sector (Sirohi et al., 1998). There exists importance of zeroing in on new inventions as vital instruments even though they contain certain risks (Littler & Melanthiou, 2006). The development and acceptance of new products is not automatic as consumers need to be given a shadow period to analyse the advantages and disadvantages before concluding on a decision. Whether or not to acquire the product. This is where agency banking comes into play. Moreover, being able to understand a consumer's process of adoption will have a major impact on the players of the financial sector notwithstanding the commercial banks as well as the consumers of these products and services. Changes in technology can influence the aspect of including value-added services to the existing services (Keen and Mackintosh, 2011). There exists no particular formula when it comes to evaluating the likeability of a new product. However researchers who have dealt with the aspect of diffusion over the years

have come up with five characteristics they consider explains the concept of acceptance. They include relative advantage; complexity; compatibility; trial ability; and observability (Rogers, 2005).

Agency Banking (AB) is a concept that is used worldwide especially with focus on financial inclusion. It largely depends on information technology as the service is mobile in nature away from the bank branch. This facility supports the function of commercial banks and allows the banks to reach the unbanked masses at their door step. A facet that has been influenced largely by the use of technology (Mas, 2008; Mas and Siedek, 2008). It is a technology that utilises mobile devices such as mobile phones (Bangens and Soderberg, 2008). A situation that sees licensed organizations contact services of retail stores who act as third parties in the relationship. Nonetheless, it has been implemented in developed nations recording success stories more so in South America (Venkatesh and Morris, 2003). Given the fact that the success stories have been in countries like India, The Philippines, Pakistan, and South Africa. It will be interesting to see if the same can be concluded in Kenya (Bloodgood, 2010). Agents can deposit cash on behalf of the customers, withdraw cash as well, process salary payments, process loan applications and assist in transfer of funds between customers (Byers and Ledere, 2002).

In Africa, the agency model is gaining ground, having being influenced by the reported success in the developed nations. In South Africa it was introduced in the year 2005 (Bold, 2011). It was applied in commercial banks which were given discretion to use non-bank third parties (Kiura, 2014). In Ghana, the model was launched in the year 2008 (McKay, 2011). However, the model did not gain ground as was expected due to a complex regulatory affiliation between the Telco's and the banks. This left the Bank of Ghana with no choice but to regulate the industry (McKay and Peter, 2014). In Tanzania, a licensed commercial bank or financial institution must acquire preceding written permission of the Bank of Tanzania before it carries out banking through an agent. The process ensures efficient compliance and due diligence which after approval, audits are conducted as well as regular spot checks just to safeguard the financial industry as a whole (McKay and Peter, 2014).

Kenya has not been left out. In 2010, the agency model was welcomed after regulation were set

by the Central Bank of Kenya. A move that was meant to mitigate the issue of having long queues at the banking halls (Sohail & Shanmugham, 2003). However, the needs of the consumers kept changing from time to time as well as their business activities. Something that kept the banks on toes. They had to constantly rely on technology to impress the consumer of their products and services. This had to be done alongside the balance of ensuring costs of operations are at its minimal (Sohail and Shanmugham, 2003). The concept of agency banking was expected to extend financial services to the customer especially the unbanked through use of technology that was common as well as familiar across the borders. Indeed, It is an important element to consider in emerging economies. Statistics from CBK indicate that as of 2017, 18 commercial banks had contracted 53,833 agents in Kenya and this was an increase from 40,592 recorded in 2015 (CBK, 2017). However, the invention has suffered blows from Telco's such as Safaricom's MPESA model that commands more volumes in terms of revenues and customer subscription, an aspect that frustrates the commercial banks efforts to reach the unbanked (Aduda, 2013).

Micro, Small and Medium Enterprises (MSMEs) are enterprises that drive economies especially when it comes to industrialization. To be successful in this segment of the economy, access to finance is extremely vital (Mckernan & Chen, 2005). MSMEs need finance to start up, expand, diversify and for working capital of the business operations. Without finance, the likelihood of failure is very high, as the enterprise cannot achieve its objectives (Mckernan & Chen, 2005). These firms however have limited access to finance given the nature of their operations. This inhibits growth which in turn could paralyse an economy (Galindo and Schiantarelli, 2003). They are drivers of development especially in Africa because they are many in numbers and employ many people ranging from between 80%-90% of the employment sector (Reinecke, 2002). In Kenya, focus has been turned heavily to the MSME segment. This is due to the increased number of businesses that have collapsed stating lack of finance as a major reason (CBK, 2018). Commercial banks are shifting focus on this sector especially given the fact that the introduction of rate capping in the year 2016 locked them out of the financial grid. Banks such as NIC, CBA, Co-operative, KCB and DTB have partnered to develop a product for this segment. STAWI is a product that has been developed to see through the access to finance challenge where traders are allowed to borrow between 3,000 to 100,000 and repay the same



between 1 month and a twelve year period (Business Daily, 2019). Furthermore, NIC had tried to launch a product with specific focus on Gikomba Market. The product, NIC-MSME was mainly focussed on soft loans. A Pilot study was conducted between the month of January and March 2019 in Gikomba Market after which the results are currently being tested to see whether the product will be launched fully.

### **1.3 Statement of the Problem**

The Central Bank of Kenya has continuously supported innovations that will broaden the financial inclusion of the majority of Kenyans. The regulator unveiled the agent banking guidelines to ensure safe, efficient and inclusive financial system as envisaged by vision 2030 in the years 2010. Even when customers have chosen to embrace the use of agency banking cases of selected use whereby they still rely on the traditional banking services despite the fact that it could still be transacted through agency banking suggests passiveness in the adoption of agency banking (Irura & Munjiru, 2013).

The MSME segment has been left out of the financial grid due to the interest capping that was introduced in 2016. This means that they are closing their businesses citing lack of finance as a major problem. Banks have over a long time strived to offer solutions for this segment due to the mass they control. Influence adds to a significant role when it comes to embracing technology as cited from studies in different countries hence the study is not exclusive to Kenya.

Luarn and Lin (2012) explained that in as much as agency banking has been studied, most of these studies have been conducted in countries deemed to be in the category of developed nations. Specific attention in developing countries has not been done. In Kenya researchers have looked at application of technology from the perspective of the commercial banks. Aspects that were directly linked to the commercial banks. (Lule, Omwanza and Waema, 2012; Al-Jabri and Sohail, 2013; Kazi, and Mannan, 2013). Customer perception has not been dealt with adequately. Moreover, Kenya being one of the top countries in the continent when it comes to technological advancements is expected to be leading in the adoption of agency banking. However, the model can still be classified as being at its infancy stages.

The customer needs to be understood before being asked to use a product or service. Perceptions of Consumers' about a brand are positively enhanced and related to increased levels of quality and endurance (Shodhganga ,2017).

The study took a comprehensive approach by building on the work of Mungai (2017) who while looking at the challenges brought about by agency banking adoption and bank performance recommended that policy makers increase awareness to the public through regular open day forums, media and exhibitions on the need and use of agency banking, and develop strategies that will attract new customers. The study was keen on answering the question; what elements should be considered when it comes to acceptance of agency banking among MSMEs in Nairobi County? In conclusion, the study sought to establish how the independent variables under study affect the adoption of agency banking by micro, small and medium business traders in Nairobi County.

## **1.4 Objectives of the Study**

### **1.4.1 General Objective**

To analyse the factors that would influence acceptance of Agency Banking among MSMEs in Nairobi County.

### **1.4.2 Specific Objectives**

1. To establish how perception stimulates acceptance of agency banking by MSMEs in Nairobi County.
2. To evaluate how social influence relates to the acceptance of agency banking by MSMEs in Nairobi County.

## **1.5 Research Questions.**

1. a) How will perceived ease of use of agency banking affect its adoption by MSMEs in Nairobi County?
1. b) How will perceived usefulness of agency banking affect its adoption by MSMEs in Nairobi County?
1. c) How will risk perception among MSMEs in Nairobi County affect adoption of Agency Bnaking?
2. How will a customers' social influence affect the adoption of agency banking among MSMEs in Nairobi County?

## **1.6 Scope of Study**

Emphasis was laid on MSMEs in Gikomba Market as a fraction meant to represent MSMEs in Nairobi County. According to the Nairobi City Count Licensing Department, Pumwani Ward, there exists 463 registered business owners in Gikomba market as at 31<sup>st</sup> March 2019 under three zones (Gikomba, Gikomba Open Air and Chiriku Lane. Hence, the total population sums to 463 MSMEs in Gikomba Market Nairobi County. Out of which 311 are registered under Gikomba Open Air, 143 are under Gikomba and 9 are under Chiriku Lane.

A report by Peter Muiruri published in the Standard newspaper in 2014 indicated that Gikomba market is the largest open air market in Nairobi County and is the second destination of second hand materials majority of which emanate from the United Kingdom. The market receives thousands of visitors who either trade, buy goods, hawk or try to employ survival tactics. He further illustrates that out of the markets population of 60% are women. Therefore, it was chosen as a viable case study as it has businesses ranging from almost all sectors of the economy. The research instrument used in the study was a structured questionnaire that was distributed to at least 20 traders of for a period of 20 days.

## **1.7 Significance of the Study**

This study will be benefit to the financial industry. Especially to management. The industry has arrangements ranging from banks to micro-finance organisations as well as other non-banking institutions that offer financial services. By establishing factors that would lead to adoption, the strength of each factor will enable financial institutions focus effectively and efficiently towards those aspects that inform the adoption of agency technology in the industry.

The study comes at a time when commercial banks have shifted focus on the MSME segment of the economy. This sector has been excluded from the financial grid due to interest rate capping. Hence, the study is relevant in policy making as the regulatory authority, CBK focuses on elements of the service charter of 2019 which includes access to finance. Commercial banks are expected to set aside lending to the MSME sector, this is a requirement in the service charter implemented from March 2019.

This investigation will compliment other forms of innovations by offering support. An aspect that will give the consumer a range of products to choose from ensuring that he/she is included in

the financial grid. The conclusions are of importance to decision makers in the industry who represent the players, stakeholders and regulators. When these factors are identified, they influence policy where the bodies involved in the policy making invent guidelines that will be suitable in directing the sector.

The research will be useful to the researchers as well as it will be a building block on understanding the unbanked customer in a manner to inform possible areas of study that will originate from the analysis of the research findings.



## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

This chapter examines work done on elements perceived to affect adoption of technology by academics, authors and researchers. The analysis borrows from Technology Acceptance Model (TAM) and Diffusion of Innovation Theory (DOI). Moreover, a conceptual framework was used to paint a picture on the link between the dependent and Independent Variables under investigation. An analysis conducted by CBK showed that agency banking is believed to be an element of cost reduction in Kenya with over 60 per cent from what a consumer would incur through the traditional model of banking (CBK, 2007).

### 2.2 Theoretical Framework

In general, agency banking as a form of technology has elicited immense investigation over time resulting to varied explanations and formed hypothesis. The outstanding theories that have been used over time to explain the concept of acceptance of technology are Technology Acceptance Theory by Davis (1989) and Diffusion of Innovation Theory by Rodgers (1983). Therefore, the researcher sought to use the two theories in a bid to examine possible reasons that would influence consumers of bank products, with special focus on MSMEs to accept agency banking.

#### 2.2.1 Diffusion of Innovation theory

When examining different cultures in a bid to explain how the conceptualize innovations or new ideas, DOI theory comes in handy (Rodgers, 1962). The theory seeks to explain on the different qualities found among different members of society that would influence their approval of new ideas. Moreover, the innovation itself might have elements that can inform and influence uptake. Therefore, the theory looks at five areas in the process of adoption. At the very top is the aspect of knowledge where one is expected to know or have an idea of the said technology but cannot comprehensively judge the technology due to lack of adequate information. Then comes the aspect of persuasion. At this stage, one is very much interested and is eager to access knowledge about the invention. After persuasion comes decision. At the decision stage, one is expected to measure the advantages and disadvantages of the invention after which he/she is expected to

come up with a decision. The expected outcome being either to embrace or drop the invention. Implementation is the fourth stage of the process. It involves actual interaction with the invention. Lastly, confirmation informs on whether the individual will continue using the invention in the foreseeable future (Rogers, 2002).

Therefore, certain elements of DOI can be used to form a conversation around elements of the theory (Li and Atuagene-Gima, 2011). Moreover, variations can exist among users given that elements of the social system as well as communication tools and the innovation itself occur at different intervals in the diffusion process. Furthermore, researchers stand a chance to benefit from the diffusion process through learning at different levels of the process which in turn would lead to intelligent solutions. Hence it is safe to say that acceptance of new technology is informed by clarity, simplicity and comparative advantage over the old system (Greenhalgh, 2004).

Therefore, one can conclude that if agency banking is clear and has an advantage over the old forms of banking, MSMEs would definitely adopt agency banking.

### **2.2.2 Technology Acceptance Model**

A person's ability to internalize and accept a particular invention has been described immensely by Technology Acceptance Model. TAM looks at external factors such as characteristics of the system, measures used in training as well as processes used to improve an existing technology (Davis, 1989). The theory can be utilised in explaining reasons behind a user's acceptance of multiple innovations (Agarwal and Prasad, 2009). Furthermore, the relevance expressed by TAM can be merged with other approaches related to technological inventions which involve decision making through distinct characteristics. Hence, it deduces that a person's decision to accept technology is informed by intent which influences attitude and beliefs.

Despite having multiple experiments conducted, usefulness has shown a strong influence to usage intentions with the regression results averaging 0.6 (Venkatesh and Davis 2002). Given the fact that handiness is a fundamental element of intent to use technology, focus is laid on studying the aspects of usefulness and how their influence informs usage which leads to an increase in experience. Davis (2002) analysed perceived usefulness and concluded that usefulness is a fraction that results into belief later influencing use of technology which creates competition.

The study described handiness as a situation where MSMEs are seen to experience convenience in managing financials through use of agency banking. However, ease of use, which is a fragment leading to purposeful intent to embrace use of new technology has shown less consistent association with adoption.

### **2.3 Empirical Review**

The effect agency banking has had over the years on economic development has been substantial hence establishing reasons for adoption becomes important. Waitangi (2010) looked at the link between agency banking and financial deepening. Despite not factoring all commercial banks in Kenya, save for the ones that had utilised the agency model, his findings indicated that a link between agency banking and financial deepening did exist. A study by Barasa and Mririgi (2013) equally sought to establish the role agency banking has on financial deepening. The study concluded that indeed, agency banking is a catalyst for explaining the aspect of financial inclusion among the unbanked in developing nations like Kenya. Tseng and Lo (2011) while looking at element that consumers would consider relevant in influencing them to adopt agency banking deduced that as long as the old model is considered useful, consumers were reluctant in adopting new technology. Anderson (2010) concurred with Tseng and Lo (2011) by establishing that agency banking as a technology has advantage over the traditional banking system since it provides a platform for provision of the same banking services found in the bank branches as well as electronic payments leading to economic development.

Afande and Mbugua (2015) while analysing the role of agency banking in promotion of financial inclusion, Afande and Mbugua (2015) came up with a conclusion that greater geographical coverage brought about by agent banking is the strongest predictor of financial inclusion. However, Kithuka (2012) analysed the aspect of location as a factor influencing agency banking and concluded that location is a non-factor and instead gave a preposition that research should be done to see how customer satisfaction affects adoption of agency banking. Mwangi (2013) on the other hand advised banks to look into the selection process of agents. A facet that was meant to cater for the issues around float and attitude of agents as a factor impeding uptake of agency banking. This study seeks to pick up from Kithuka (2012) by analysing what elements would make a business owner belonging to the MSME segment in Nairobi County consider Agency Banking. Moreover, Dupas et al., (2012) established reliability and quality of service offered by

bank agents as one of the impediments when it comes to adoption of agency banking as a tool that would lead to financial inclusion among the residents of Western Kenya.

Businesspeople have expressed their worries around liquidity and insecurity at the agency outlets (Nyaboga et al., (2012), elements that the researcher equally seeks to justify under perceived risk as a factor affecting uptake of agency banking. Watiri (2013) established aspects of cost reduction, good customer service and geographical presence as factors that inform adoption of agency banking by commercial banks in Kenya. The study by Watiri (2013) advised banks to implement a risk-based approach to the supervision and regulation of agency banking while putting sufficient security measures in place. The study suggested further research to investigate the reasons behind success of the agency model among different industries as well as the banks that have not adopted agency banking in order to form a clear conclusion.

Irura and Munjiru (2013) while looking at the bottlenecks involved in implementing agency banking in Kakamega County established that literacy informs opinion as consumers stand to gain when informed on the benefits of agency banking. Mwaura and Mosoti (2014) looked at the investigation of the slow adoption of agency banking services in Kenya and came up with a conclusion that the Kenyan customer does not fully understand the concept of agency banking and the benefits that are derived from engaging with the technology. Hence, the necessity that comes with investigating the factors that would inform adoption of agency banking among MSMEs becomes relevant at this point. Moreover, Mungai (2017) while analysing possible hindrances to adoption of agency banking which would later affect performance of commercial banks gave a recommendation on the importance of awareness. He advised policy makers to consider regular open day forums, exhibitions and advertisements that would emphasis on the need and use of agency banking, after which strategies needed to be developed as a measure to attract potential customers.

### **2.3.1 Perceived ease of use.**

Ease of use is a concept that describes simplicity; when an item or invention is free of extortion, and an individual is seen to consume the invention with minimum or no effort (Davis, 1989). Given that it supports simplicity, it can be used to explain intent of use when it comes to



adoption of agency banking. A concept that can be used to steer the importance of consumption of innovation when it comes to management of finances (Davis, 1989). This will definitely affect one's attitude and influence intent of use (Schierz et al. 2010).

The concept of simplicity has been studied over the years to try and evaluate a possible relationship with intent. Curran and Meuter (2005) analysed the possibility of a link between the two aspects as mentioned and came up with a conclusion that there is a positive association between intent and simplicity. This means that there exists a relationship which can be defined as indirect between attitude and simplicity depicting a strong correlation between simplicity and possible adoption of new inventions (Gu et al., 2009; Luarn and Lin, 2005; Venkatesh and Davis, 2000). Hence it is important to ensure developers have coined agency banking in a manner that promotes simplicity in order to cater for all fragments in society. This means that even the illiterate can understand the model with ease. An aspect that is very important because if simplicity is omitted, it might negatively influence adoption of agency banking.

### **2.3.2 Perceived Usefulness**

Usefulness is an aspect used to bring out the concept of comparative advantage. When an invention supersedes an existing invention, it is said to be useful (More and Benbasat, 1991). This means that there exists possibility of increased benefits that will trickle down to an individual and inform society as well through uplift of one's status eventually leading to improved status of the economy (Rogers, 2003). Hence one can conclude that usefulness informs intent which leads to adoption (McCloskey, 2006; Rogers, 2003).

Aspects such as handiness and efficiency are measured when it comes to analysing usefulness. The question that is being answered in this case is what benefits does one encounter in using a new invention. How does it improve on the businessman's work process or financial management process (Davis, 1989). Consequently, usefulness equally informs one's feeling towards new inventions leading to a possibility of embracing the technology as long as they offer efficient means of handling financial obligations such as bill payments (Pikkarainen et al., 2004). Moreover, usefulness informs user behaviour that ultimately leads to possible adoption. An aspect supported by the notion that when one realizes the importance of alternate solutions, adoption levels will most definitely increase.

Nonetheless, usefulness depicts a strong correlation with attitude. It can be concluded that attitude is a major influence to intent of adoption of technology (Akturan and Tezcan ,2012). Of key interest therefore will be ensuring possible willingness to use technology based on informed perception (Hanafizadeh et al., 2014). This means that for an invention to be considered useful it must offer an extra service compared to the preceding invention. It must increase efficiency f the consumer and positive influence on his/her economic status must be felt as well. (Lin 2011).

### **2.3.3 Perceived Risk.**

When a consumer perceives uncertainty in terms of possible adoption, it is said that there is existence of risk (Ram and Sheth, 1989). Uncertainty is influenced by doubt which can be informed by inconsistency between the expected outcome of inventions and the real outcome experienced (Chen 2008; Koenig-Lewis 2010; Lee et al., 2007). It is important to note that the concept of risk has over the years been examined to see its impact on possible adoption of technology, bringing out the importance of keeping this construct under control due to its effect on adoption of new technology (Gewald et al., 2006; Ndubisi and Sinti, 2006).

Agency banking In particular can be associated with risk under the aspects of threat to confidentiality of consumer information and controls used at the premises to safeguard the consumers (Luarn and Lin, 2005). Threats that come with technology such as hacking, theft and loss of passwords/pin codes can equally inform risk (Kuisma et al., 2007). An investigation by Poon (20018) drew conclusions that hacking can be done successfully when pin codes are accessed. The Point of Sale devices used by agents have not been left out as well. They can equally be stolen and the fear is that the thief can access customer information (Coursaris et al., 2003).

Analysing possible risk is relevant in this study because agency banking shifts the concept of banking that consumers are familiar with such as availability of security guards, CCTV cameras on stand by and most access areas being under lock and key to a simple model that is mobile in nature with minimal controls hence deemed to threaten security. When one fears that an agents device may be stolen or the premise invaded and there will be no footage to investigate the break in, risk is felt among consumers (Coursaris et al., 2003). A consumer will be relieved when the possibility of risk is at its minimal hence informing adoption positively.

#### **2.3.4 Social Influence.**

An individual does not exist in isolation; he/she exists in a society. This society is made up of close family members, extended family members as well as friends. Every human being is always in such of validation especially when it comes to internalizing or accepting something new. They need to feel that what they are doing is acceptable among their networks (Rogers, 2003). As far as validation is concerned, it pours down to affect ones' image (Skog, 2012). With a positive image, one can be confident in using new technology for the long term.

Four elements believed to influence adoption, the social system being one of them were examined by Mazman, Usluel and Çevik (2009). They looked at factors linked the social system that one considers before using something new. The conclusion was that compliance influenced by approval of the social system as well as identification measured by self-fulfilment and internalization when influence positively informs adoption can be used to analyze intent of use of new technology (Mazman, Usluel, & Çevik, 2009). Moreover, a study conducted equally described three facts that form the basis of social system effect on adoption. These elements include, macro-domain; associated with the industry/market: Meso-domain related to existing relationships in the social system and micro domain (MacVaugh and Schiavone ,2010). Therefore, social influence falls under meso domain, illustrating that communities and networks influence decisions. Communities shape attitude which influence intent of use due to the possibility of influencing impressions created when one is seen using agency banking (Lekhanya, 2013). Moreover, the benefits associated with adoption of new technology among the social system can positively inform adoption of new technology (MacVaugh and Schiavone , 2010).

Nonetheless it is assumed that once one has had exposure to elements of ICT, agency banking becomes easy to conceptualize, this is influenced by self confidence attributed to available knowledge (Al-Somalli et al., 2009). Moreover, a change of attitude can influence ease of use and possible acceptance of new technology (Nasri and Charfeddine, 2012). Therefore, one can conclude that the social system has a role in adoption of technology. When the system informs embracing technology, members of the system will be allured to do the same (Di Pietro, Di Virgilio and Pantano, 2012). Lastly, social systems influence uptake of technology as concluded by Lekhanya (2013). Therefore, the degree to which an individual sees that others believe he or

she should use the new system partly determines the actual decision for the adoption of the innovation by the individual (Kenneth, Rebecca, & Eunice, 2012).

## **2.4 Research Gap**

The use of technology in banking services has created awareness on the importance of agency commerce. Agency banking services lead to time management, flexibility of access for customers and savings of costs incurred in contracting financial services through agencies as opposed to the bank branches.

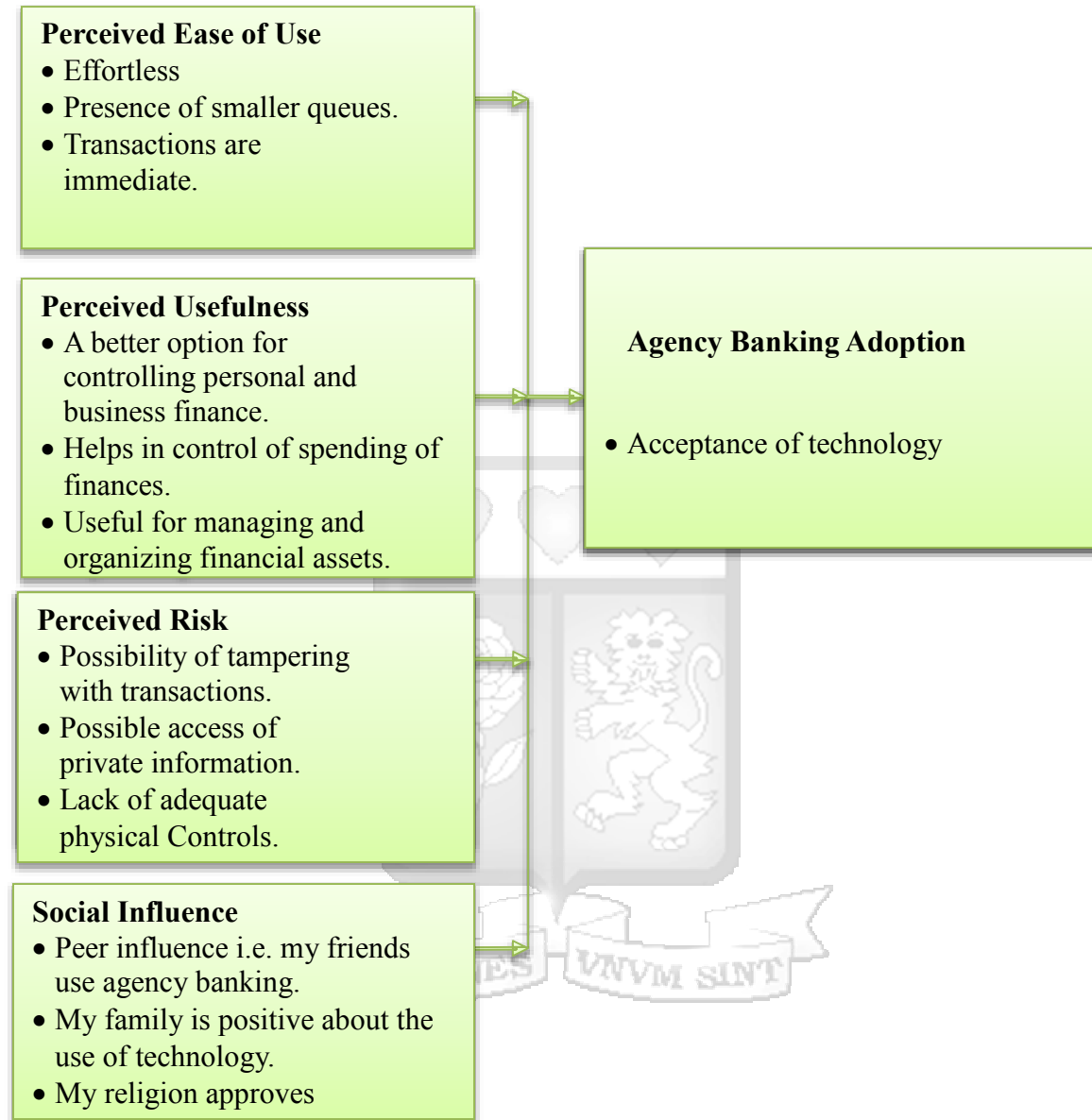
The literature has picked out the factors seen to affect adoption of agency banking. Of relevance is the fact that it is evident that commercial banks when supported with innovations have led to positively embracing new strategies which improve ones' lives.

Therefore, it is important to analyse the consumers' perception which leads to intent of use because the agency model has an important role in financial inclusion but perception can be a hindrance. Minimal research has been conducted on consumer perception with regards to agency banking adoption. Hence, the study seeks to fill this research gap by adding to existing literature, and establishing whether the prescribed factors are effective in determining adoption of agency banking and if there is need for improvement.

## **2.5 Conceptual Framework**

A conceptual framework is a representation of the philosophies constructed from significant fields of analysis and used to build a successive presentation (Reichel and Ramey, 1987). The diagram in figure 2.1 informs the research as well as bringing out the link between the key variables in the study. The diagram tries to explain the elements one would consider to influence the implementation of agency banking among MSMEs. In conclusion, it brings out the main concepts explored by Davis (1989) namely; perceived ease of use, perceived usefulness, perceived risk, and social influence.

**Figure 2.1 Conceptual Framework.**



**Source, Author (2019)**

## **2.6 Operationalization of the Variables**

Perceived ease of use, perceived usefulness, perceived risk and social influence on agency banking adoption were operationalized as illustrated in table 2.1.

**Table 2.1 Operationalization of the Variables.**

<b>Variable</b>	<b>Indicator</b>	<b>Measure of Indicator</b>	<b>Source</b>
Reception of agency banking (Dependent Variable)	Fulfilment with technology.	Application of 5- Point Likert Type Scale	Tu et al., 2001
Usability of Agency Banking. (Independent Variable)	<ul style="list-style-type: none"> <li>• Free of exertion</li> <li>• There exist no lines.</li> <li>• Impact of financial exchange can be seen right away</li> </ul>	Application of 5- Point Likert Type Scale	Wang et al., 2015
Handiness of Agency Banking (Independent Variable)	<ul style="list-style-type: none"> <li>• Helpful method of managing finances.</li> <li>• Most efficient over control on finances.</li> <li>• Valuable for overseeing financial assets.</li> </ul>	Application of 5- Point Likert Type Scale	Anand & Ward, 2004
Perceived Risk (Independent Variable)	<ul style="list-style-type: none"> <li>• Chances of transactional manipulation.</li> <li>• Accessibility of private information.</li> <li>• Physical Inspections.</li> </ul>	Application of 5- Point Likert Type Scale	Wang et al., 2015

Social Influence(Independent Variable)	<ul style="list-style-type: none"> <li>• A large portion of my companions use Agency Banking.</li> <li>• Family association.</li> <li>• Religious association.</li> </ul>	Application of 5- Point Likert Type Scale	Wang et al., 2015
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**Source: Author (2019)**



## **CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY**

### **3.1 Introduction**

This chapter laid out the method used to collect and analyse statistics in a bid to assist in analysis of the study objectives. The section curves out the scope under study while equally looking at the design and procedure used. Moreover, the target population was equally defined as well as the techniques used to sample the study population. The relationship between the variables was analysed using measures of central tendency as well as correlation and regression models.

### **3.2 Research Philosophy**

It is important to consider human knowledge and its development. This aspect of the cognitive assumes that a human being is realistic as well as informed through values and the ethos of society (Saunders et al., 2009). When a philosophy is considered with clarity, the concept behind methodology, collection techniques plus strategies flows with precision (Kothari, 2004). The philosophy adopted was positive. Positivism deals with units that can be observed and tested. The approach was used in this study where there was an observable social reality (Saunders et al, 2009). The assumption made was that relationships and correlations between variables were evaluated using structured questionnaires and official statistics (S.Kuhn, 2004).

### **3.3 Research Design.**

A research design is a blueprint that qualifies analysis of various operations thus making the study resourceful, which translates to adequate information with less utilization of time, effort and money. The research inferred descriptive research design which according to Cooper and Schindler (2006) is a detailed explanation of occasions, conditions and collaborations between individuals and possessions. Given that a research design is concerned with collection of data that describes events and then organizes, tabulates, classifies, illustrates and defines the data interpretation of the variables is concerned with answering the who, what and how questions. Therefore, descriptive design interprets the general characteristics of the population under study population and displays the association between the independent and dependent variables. Therefore data that described the study was collected and arranged in an organized manner which informed compilation of quantitative data to provide a clear depth of responses which led



to accurate and elaborate undertaking of the question under investigation.

### 3.4 Population of the Study

A population is all items in the fired under inquiry (Kothari,2004). It is an unbiased and objective list upon which a researcher makes a selection ( Denscombe, 2007). Conferring to the Nairobi County Licensing department, Gikomba market has a total population of 463 registered MSMEs as of March 2019. This statistic as illustrated only includes licensed businesses, as there has been a series of fires that have affected operations in the market leaving the number of unlicensed businesspersons is unknown. Hence, the researcher sought to use the known statistic as a reference point. The market is divided into three zones (which shall be used as strata) as illustrated below.

**Table 3.1 Study Population.**

STRATUM	POPULATION UNDER STRATUM
Gikomba	143
Gikomba open air	311
Chiriku lane-Gikomba	9
<b>Total</b>	<b>463</b>

**Source: Nairobi City County Licensing Department-Pumwani Ward (2019).**

### 3.5 Sample Size

It is a minor group or sub-group acquired from the existing population (Mugenda and Mugenda, 2003). A size of 210 was arrived at by computing the target population of 463 with a confidence level of 95% and an error of 0.05 using the following formula derived by Kothari (2004).

$$n = \frac{z^2 \cdot N \cdot \partial_p^2}{(N - 1)e^2 + z^2 \partial_p^2}$$

$$n = 1.96^2 \cdot 463 \cdot 0.5^2$$

$$(463-1)0.05^2 + 1.96^2 \cdot 0.5^2$$

$$= 210$$

Hence;  $n$  = Sample size,

$N$  = Population size fixed as 463

$e$  = Error within acceptable limits and set as 0.05,

$\sigma p$  = the population's standard deviation and set as 0.5 where not known,

$Z$  = Standard variate at a confidence level set as 1.96 at confidence level of 95%.

Therefore, the size of the sample was 210 MSMEs in Gikomba market.

### **3.6 Sampling Design**

A design can be described as a blueprint that facilitates the selection process for observations. (Denscombe, 2007). Given the fact that Gikomba Market is divided into three divisions as per statistics availed by the county officer at Pumwani Ward, the researcher decided to use the three divisions as strata. Hence, stratified random sampling was used. Participants in each stratum were distinct so that every member of all divisions gets equal opportunity to be selected using simple probability (Stat Trek, 2019). In this method; each stratum sample size is directly proportional to the population size of the entire population of strata. That means each stratum has the same sampling fraction. Moreover, since the Sampling fraction is the primary differentiating factor between the proportionate and disproportionate stratified random sampling. Disproportionate sampling was used as the strata had dissimilar sampling fractions. The success of this sampling method is reliant on the researcher's accuracy at fraction allocation. If the allotted fractions are not accurate, the results may be subjective due to the overrepresented or underrepresented strata.

This sampling technique covers maximum population as the researcher has complete control over the strata division. Hence, precision of statistical results is higher than simple random sampling since the elements of the sample are picked from relevant strata. The variation within the strata will be much lesser than the variation that exists in the target population.

**Table 3.2 Sample Population.**

<b>STRATA</b>	<b>POPULATION UNDER STRATUM</b>	<b>COMPUTATION OF PROPORTION OF POPULATION</b>	<b>EXPECTED SAMPLE SIZE</b>
Gikomba	143	$210/463 \times 143$	65
Gikomba open air	311	$210/463 \times 311$	141
Chiriku lane-Gikomba	9	$210/463 \times 9$	4
<b>Total</b>	<b>463</b>		<b>210</b>

From table 3.2, the researcher adopted random sampling from the list of businesses issued by the Nairobi City County Licensing Department. The list contained the name of each business owner, the nature of business as well as the actual location, using stall numbers/plot numbers. Hence, the researcher adopted a 5-count policy rule in the Gikomba Strata and Gikomba Open Air strata. This means that questionnaires were distributed after every 5 count of business. Whereas with the Chiriku Lane Strata, questionnaires were distributed to all business owners (9) and 5 were obtained as opposed to the expected sample of 4.

### **3.7 Data Collection Instruments**

Given the nature of the population under study, primary data was considered relevant and was collected by use of a questionnaire that comprised of both open ended and closed ended questions. (Appendix I). The analytical tool was divided into two parts. The first part analysed the respondents demographic characteristics whereas the second part analysed their approach to each factor in the tool using a five point likert scale where 1 depicted strongly disagree, 2 agree, 3 neutral, 4 agree and 5 strongly agree.

#### **3.7.1 Validity of Instrument**

Patton, (2000) interprets validity as parity linked to preposition or measures of the degree to which they adapt to determine knowledge or truth. An attitude gauge is considered valid, for example, to the degree to which its results agree with other measures of possession of the attitude. Validity of the instrument was determined, where the response of the respondents was measured against the research objectives. For an instrument to be considered valid, the content selected and included in the questionnaire must be relevant to the variable being examined. A

pilot is the pre-testing of the research instruments using subjects randomly drawn from the population before the field collection of data to determine the validity and reliability of the questionnaires in collecting the expected but the subjects are excluding from the actual study.

### 3.7.2 Pilot testing of instrument

The piloting involved twenty respondents from Gikomba market. These respondents did not take part in the main study to avoid chances of bias. Pilot testing involved testing the research instrument in order to determine the suitability in actual field conditions (Kumar, 2010). The research employed pilot study in testing validity and reliability of the data collection instrument. This was conducted through the research tool used in the main study.

During the pilot test, it was established that the respondents prefer being taken through the questionnaire as an interview as opposed to filling in the questionnaire in person. This necessitated the use of research assistants who would help in collection of data. Interviews were conducted and the requirements for the assistants were students from university below the age of 25 who know the concept of research. Four assistants were shortlisted out of which two were obtained. These two were third year students from Kenyatta University and Kenya Methodist University (KEMU) of male and female gender of ages 23 and 22 respectively.

### 3.8 Data Analysis Techniques.

All collected data was measured for completeness. In order to determine precision, the concept of editing was introduced which included critical analysis of the questionnaire omitting obscured, unreliable and vague reactions. A program that involved coding was formed. After the process, data was cleaned to ensure reliability of responses. The descriptive analysis used diagrammatic presentations such as tables and measures of central tendency measure the respondents' responses that could explain or give answers to the four research questions. To narrow down the strength of the different solutions, a correlation analysis was conducted (Pearson's' correlation coefficient).

The general model was presented as follows;

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots \dots \dots B_N X_N + E$$

Where;

$Y$ =Agency Banking acceptance.

$X_1$ =Easy to use.

$X_2$ =Considered Useful.

$X_3$ =Considered Risky.

$X_4$ =Influence from society.

While  $\beta_1 \dots \beta_4$ =are the constants for the respective factors to be assessed and  $\varepsilon$  is the error term.

### 3.8.1 Testing the Model

The following tests were performed and explained; correlation coefficient, coefficient of determination, T-test and Multicollinearity among the independent variables. Correlation coefficient ( $R$ ) shows a correlation between all perceived characteristics of innovation and agency banking adoption (Limthongchai & Speece, 2003). The correlation coefficient is usually within the range of values ranging between -1 and 1 (Kothari, 2004). A correlation of -1 simulates a perfect negative correlation while a correlation of 1 illustrates a perfect positive correlation. Whereas 0 indicates no relationship. The nearer the correlation coefficient is towards -1 or 1, the stronger the relationship between the variables (Lancaster, 2005). Coefficient of determination ( $R^2$ ) describes the degree of variability shared by variables. It is a square of the coefficient of correlation ( $R^2$ ); it predicts about one variable if the determination degree is known.  $R^2$  ranges from 0 to 1. If a model is closer to 1, then it has a better fit with the data (Lancaster, 2005).

A T-test facilitated the establishment of whether the dependent variables were individually influenced by the independent variable. T-values were obtained from the regression output and interpreted such that if the values were less than 0.05, they were significant and should be included in the model otherwise if more than 0.05, they were insignificant (Saunders et al., 2009). Moreover, Descriptive analysis is largely the study of distributions of one variable and

involves reorganizing, gathering and interpreting data to generate descriptive information (Kothari, 2004). In this study, statistical measures such as mean standard deviation, and the median were used.

Lastly, Multi-collinearity, which refers situations where there is a high correlation between independent variables in the model, which results in a high coefficient of determination, was equally tested. Variance inflation factor (VIF) was used to test whether the presence of multicollinearity was statistically significant (Kandananond, 2012).

### **3.9 Research Quality**

#### **3.9.1 Validity**

Validity can be used to define accuracy. When an instrument successfully measures the intended objective under study, it is said to be valid. The study sought to establish validity by focussing on the objectives under study, establishing whether right variables were analysed. In summary, it is difficult to determine complete efficiency of a model hence it is advisable to avoid use of leading questions in the questionnaire.

#### **3.9.2 Reliability**

Reliability looks at consistency by eliminating errors in the model. Measures that reduce bias are welcome in this case. Piloting which involved selection of 20 respondents whose findings were not included in the study sought to ensure there existed consistency. In order to analyse internal consistency of the questionnaire, the data was subjected to the Cronbach's alpha analysis. Of key note is that greater consistency is defined with the existence of a strong correlation.

The study was gauged to see whether the instrument was consistent and effective so as to influence the accuracy of the assessment and evaluation. A research tool cannot be effective without being consistent. Consistency is commended before conducting a test for research or examination (Nunnally and Bernstein, 1994). Reliability evaluation elaborates the possibility of errors in a test and its particular measure. The acceptable values of alpha range from 0.60 to 0.90 (Bland and Altman, 1997). Table 3.2 is a figurative representation of the Cronbach's alpha.

**Table 3.3 Cronbach's Alpha Index and KMO**

Type of Variable		No. of items in Cronbach's Alpha Index		
Sampling adequacy		the scale		
Structural Variables			Alpha	
	Acceptance of Agency Banking	8		0.6030
	Perceived Ease of Use of agency banking	4		0.3732
	Perceived Usefulness of Agency Banking	5		0.6764
	Perceived Risk of Agency banking	5		0.4136
	Influence on customers through society.	4		0.2735
	RC-AMB	18		0.7638
<b>Overall</b>		<b>26</b>		<b>0.8227</b>

\*KMO= Kaiser-Meyer-Olkin

Cronbach's alpha index deemed to justify the low alpha test for individual variables since there existed more than one concept under investigation.

### 3.10 Ethical Considerations.

Kothari (2004) explains that ethical considerations are of utmost importance, particularly when research involves people. According to Saunders (2009), research ethics is the suitable behaviour of research relative to societal norms. Information was composed from the sampled respondents after being accorded an introduction letter from the researcher. Participation of respondents was voluntary and the material collected was not shared or used for any other purposes but the proposed one. Identity of the respondents is also kept private.





## **CHAPTER FOUR: RESEARCH FINDINGS AND PRESENTATION**

### **4.1. Introduction**

Chapter four brings out the detailed analytics of the conclusions that seek to answer the questions under study. This segment is divided into 6 parts. Section 4.2 summarizes the demographics. Section 4.3 looks at the descriptive analysis. Section 4.4 analyses the diagnostic tests carried out while section 4.5 looks at the overall findings related to the objectives. Section 4.6 looks at the independent variables and lastly section 4.7 gives a chapter summary.

### **4.2 Demographic Characteristics**

Demographics seek to analyze the characteristics of the respondents. These characteristics include age, gender, marital standing, response rate, level of education and gender. The number of years MSMEs have been in operation in Gikomba was equally analyzed.

A total of 210 questionnaires were distributed among the selected MSMEs in Gikomba market. Out of which 209 were qualified for analysis. This means that the response rate was 99.5%. The response rate qualified for analysis given the fact the Babbie (2015) while giving the different qualifications of a target sample explained that 50% is acceptable for analysis and publication. 60% is good while 70% is very good.

As explained above, age was a requirement out of which 31.6% of the sample population were aged between 18 and 23; 23.9% were aged between 39 to 43; while 0.4% represented the age bracket of 54 to 58. Moreover, out of the 209, 100 were female while 109 were male. Furthermore, 31.2% of the population were married whereas 30% were single. Respondents who chose any other as an option were either widows or widowers.

As earlier mentioned, number of years of trade was equally relevant hence a statistic of 39.7%, being the highest represented those who had been in Gikomba for a period of 4 to 6 years. Table 4.1 summarizes the response rate whereas table 4.2 gives a summary of the demographics.

**Table 4.1 Response Rate.**

Feedback	Sum Total	Percentage
Distributed and returned	209	99.52%
Distributed and not returned	1	0.48%
<b>Total</b>	<b>210</b>	<b>100%</b>

**Table 4.2 Demographic Characteristics.**

<b>Gender</b>		
	Frequency	Percentage
<b>Female</b>	100	47.8%
<b>Male</b>	109	52.2%
<b>Total</b>	<b>209</b>	<b>100.0%</b>
<b>Age bracket</b>		
	Frequency	Percentage
<b>18-23</b>	66	31.6%
<b>24-28</b>	4	1.9%
<b>29-33</b>	6	2.9%
<b>34-38</b>	6	2.9%
<b>63 years and above</b>	27	12.9%
<b>39-43</b>	50	23.9%
<b>44-48</b>	2	0.9%
<b>49-53</b>	35	16.8%
<b>54-58</b>	1	0.4%
<b>59-63</b>	12	5.8%
<b>Total</b>	<b>209</b>	<b>100.0%</b>
<b>Highest level of education</b>		
	Frequency	Percentage
<b>Primary</b>	41	19.6%
<b>Secondary</b>	101	48.3%
<b>University</b>	15	7.2%
<b>Tertiary/Polytechnic</b>	34	16.3%
<b>None</b>	18	8.6%
<b>Total</b>	<b>209</b>	<b>100.0%</b>
<b>Marital status</b>		
	Frequency	Percentage
<b>Single</b>	62	30.0%
<b>Married</b>	107	51.2%

<b>Divorced</b>	22	10.2%
<b>Other</b>	18	8.6%
<b>Total</b>	<b>209</b>	<b>100.0%</b>
<b>Number of years traded in Gikomba market</b>		
	Frequency	Percentage
<b>0-3 years</b>	81	38.8%
<b>4-6 years</b>	83	39.7%
<b>7-9 years</b>	23	11.0%
<b>Over 10 years</b>	22	10.5%
<b>Total</b>	<b>209</b>	<b>100%</b>

### 4.3 Descriptive Statistics.

The focus of descriptives was to come up with conclusions on possible factors that would affect adoption of agency banking. The factors under investigation in the study were perceived usefulness, perceived ease of use, perceived risk and social influence.

#### 4.3.1 Agency banking Adoption.

It was relevant to establish whether the respondents understood the concept of agency banking. For a technology to be accepted, understanding what it entails becomes of essence. Table 4.3 deduced an overall mean of 3.30 and standard deviation of 1.19. This means that MSMEs in Nairobi county concurred with the facets of agency banking and what could lead to possible adoption.

**Table 4.3 Agreement on usage of agency banking.**

Descriptive Statistics			
	N	Mean	Std. Deviation
<b>Practicality of agency banking.</b>	209	2.87	1.203
<b>Useful in paying bills and other businessmen.</b>	209	3.67	1.180
<b>Ease of conducting payments and bank transactions.</b>	209	2.89	1.172
<b>Convenience in paying for goods and services.</b>	209	3.76	1.190
<b>Valid N (list wise)</b>	209	3.30	1.19

From the table 4.3, it is safe to conclude that the aspect of practicality stood out. The respondents concurred that agency banking can sought them out when it comes to payment of bills and suppliers as well as debtors. They equally agreed that agency banking is simple and equally convenient.

#### **4.3.2 Connection between perception and Agency Banking.**

Focus was to establish whether perception affects adoption of agency banking. This informed the first objective which sought to establish if perception can affect adoption of agency banking among MSMEs in Nairobi County. Aspects of risk, usefulness and ease of use were measured.

Eight questions were set out to analyse the possibility of usefulness being a contributor to agency banking adoption. The outcome was measured and a mean of 3.26 obtained as well as a standard deviation of 0.89. This in general can be summarized to mean that the respondents were in agreement that indeed usefulness influences possible uptake of agency banking. The results are illustrated in table 4.4.

**Table 4.4 Perceived Usefulness of Agency Banking.**

Descriptive Statistics: Perceived Usefulness			
	N	Mean	Std. Deviation
Ability to check account details.	209	3.43	0.857
Ability to view statements and mini-statements.	209	3.29	0.871
Ability to pay government bills and public utilities.	209	3.40	0.864
Funds transfer to other banks.	209	3.19	0.868
Loan and credit card payment.	209	3.26	0.915
Accessibility of real time services offered by Commercial Banks.	209	3.19	0.893
Ability to design personal financial services.	209	3.08	0.955
Cost reduction on banking services.	209	3.21	0.930
Valid N (listwise)	209	3.26	0.89

**Source: Author (2019)**

From the table 4.4, one can conclude that the respondents were particularly concerned with accessing their accounts to check the bank balances. Paymnet of debts that is loans equally stood out while interest in personal finance design was at its minimal.

While looking at ease of use, a mean of 3.33 was established. The standard deviation was 1.12. Hence, the respondents were not concise in establishing whether ease of use affects adoption of agency banking. The outcome shows neutrality which means that they neither oppose the notion of ease of use nor do they concur with it. Table 4.5 gives a summary of the findings under ease of use.

**Table 4.5 Perceived ease of use and agency banking.**

Descriptive Statistics: Perceived ease of use			
	N	Mean	Std. Deviation
<b>There exists clarity and understand ability.</b>	209	3.37	0.870
<b>Less mental effort is required with agency banking.</b>	209	3.34	0.875
<b>There exists dependability with Agency banking.</b>	209	3.26	0.893
<b>There exists flexibility with Agency banking.</b>	209	3.26	0.871
<b>There exists clarity with agency banking.</b>	209	3.29	0.869
<b>Valid N (list wise)</b>	209	3.30	0.88

**Source, Author (2019)**

From the table above, it is safe to conclude that clarity and being able to understand the system highly describes the aspect of ease of use in adoption of agency banking.

The third measure pertinent to perception on adoption of agency banking was perceived risks. Table 4.6 brings out the summary of measures of perceived risk giving a mean statistic of 3.30 and a standard deviation of 0.88. This means that neutrality was equally being experienced when it comes to perceived risks. Meaning that respondents were not sure whether risk did affect their intent to use agency banking.

**Table 4.6 Perceived Risk and Agency Banking.**

Descriptive Statistics: Perceived Risks.			
	N	Mean	Std. Deviation
<b>Safety of sensitive Information.</b>	209	3.61	1.718
<b>There exists security of information</b>	209	3.55	0.889
<b>Security on transmission of information.</b>	209	3.18	1.039
<b>There exists minimal technological failure.</b>	209	3.06	1.091
<b>Fear of losing passwords, pin codes and threat of hackers is minimal.</b>	209	3.26	0.884
<b>Valid N (list wise)</b>	209	3.33	1.12

**Source: Author (2019)**

From table 4.6, safety of sensitive information is a key concern when it comes to measuring risk. With a mean of 3.61, this shows that customers are keen to ensure the information transmitted on agency banking is securely preserved or transmitted.

#### **4.3.3 Connection between Social influence and Adoption of Agency Banking**

Measures of social influence as indicated in the likert scale in table 4.7 shows an overall mean of 3.61 and a standard deviation of 0.93. In a nutshell, the statistics indicate that MSMEs agree with social influence as a possible factor influencing adoption of agency banking.

**Table 4.7 Social influence and Adoption of Agency Banking**

Descriptive Statistics: Social Influence			
	N	Mean	Std. Deviation
<b>Influence from friends, relatives and business partners.</b>	209	3.93	0.872
<b>Impact on self-image.</b>	209	3.78	0.890
<b>Impact on personal prestige.</b>	209	3.43	0.979
<b>Comparison with peers through current trends.</b>	209	3.29	1.074
<b>Knowledgeability of agency banking.</b>	209	3.61	0.856
<b>Valid N (listwise)</b>	209	3.61	0.93

Source: Author (2019)

#### 4.4 Diagnostics tests

A set of tests were conducted before the regression was run. These tests as indicated in chapter three were test for heteroscedasticity, test for autocorrelation, test for multi-collinearity and test for normality.

Heteroscedasticity looks at conditions that the variance can fail to be constant. This leads to violation of the aspect of the error term. The Lagrange Multiplier was used to look for possibility of heteroscedasticity (appendix 4). Aspects such as coefficient of determination ( $R^2$ ) were used. Emphasis was attainment of a constant variance. An illustration through a histogram was used to analyse normality by devising a normality curve drawn on the histogram. A conclusion can be drawn that if the histogram is well covered by existing normality density curve, the data is normal. Results as shown in appendix 4 depict normalcy.

Autocorrelation is an occurrence where the residuals in a model are correlated which will have a negative influence in the model meaning that a correct inference cannot be made. Durbin Watson statistic was used to test for autocorrelation. The calculated Durbin Watson statistic was closer two = 1.869  $\cong$  2 hence a conclusion was made that there is no autocorrelation (appendix 4).

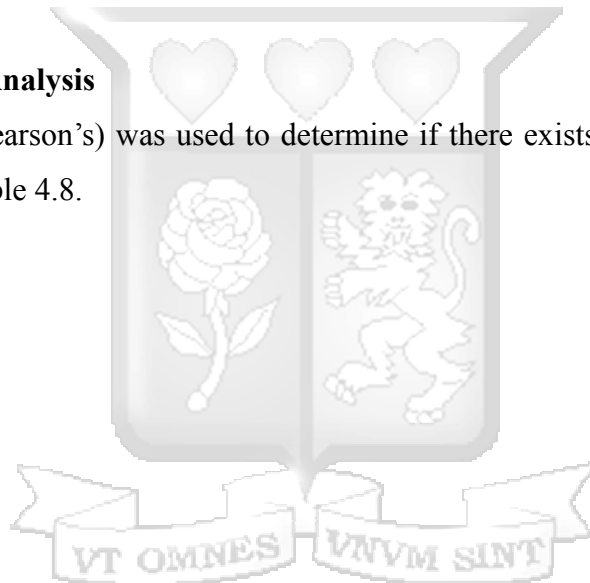
Multi-collinearity occurs when there is high correlation between independent variables in a equation which results to high coefficient of determination. Variance inflation factor (VIF) was used to test whether presence of multicollinearity was statistically significant. The VIF was less than 10 which indicates that the presence of multicollinearity was not statistically significant (appendix 4)

#### **4.5 Factors influencing adoption of agency banking.**

The research conducted sought to determine elements that would make MSMEs accept the concept of agency banking in Nairobi County. Pearson's rho correlation analysis was first piloted to assess the strength and direction of the relation between the independent variables and the dependent variable.

##### **Pearson's Correlation Analysis**

A Parametric method (Pearson's) was used to determine if there exists correlation between two variables as shown in Table 4.8.





**Table 4.8 Pearson's Correlation Analysis**

<b>Table 4.8: Pearson's correlation analysis results</b>						
		Agency Banking Adoption	Perceived usefulness	Perceived Risk	Perceived Ease of Use	Social Influence
<b>Agency Banking Adoption</b>	R	1	.554**	.219**	.396**	.444**
	P value		0.000	0.001	0.000	0.000
<b>Perceived Usefulness</b>	R		1	.219**	.428**	.482**
	P value			0.001	0.000	0.000
<b>Perceived Risk</b>	R			1	.516**	.281**
	P value				0.000	0.000
<b>Perceived Ease of Use</b>	R				1	.472**
	P value					0.000
<b>Social Influence</b>	R					1
	P value					
<b>**.</b> Correlation is significant at the 0.01 level (2-tailed).						

In table 4.8, correlation at the 0.01 level among the variables is shown by two asterisks (\*\*). Pearson's rank correlation was used to analyse if there was an association between each of the independent variables and the dependent variable. A range of -1 to 1. 00- .019 shows a very weak relationship; 0.20-0.39 shows weak relationship; 0.40-0.59 indicates moderate relationship; 0.60-0.79 shows strong relationship and 0.80 -1.0 shows very strong relationship. The result in the Table 4.8 shows that there was a weak relationship between Agency banking adoption and perceived risks factors. However, the relationship was positive and statistically significant at 1% significance level ( $R_s = 0.219$ ,  $p \text{ value} = 0.001 < 0.01$ ). Hence, Usefulness, Ease of Use and Social Influence and Agency banking

adoption had a positive moderate relationship. These associations were statistically significant at 1% significance level ( $R_s = 0.554$ ,  $p \text{ value} = 0.000 < 0.01$ ), ( $R_s = 0.396$ ,  $p \text{ value} = 0.000 < 0.01$ ) and ( $r_s = 0.444$ ,  $p \text{ value} = 0.000 < 0.01$ ) respectively.

#### **4.5.1 Regression Analysis**

As indicated in the general objective, the focus of this study was to launch factors influencing the adoption of agency banking among micro, small and medium sized enterprises in Nairobi County. If a connection can be established between the dependent and independent variables, multiple regression analysis can be used to establish the effect of each of independent variable to dependent variables individually. Thereafter, the impact of independent variables on the dependent variables is analysed using the overall model. Coefficient of determination ( $R^2$ ) and analysis of variance (ANOVA) to examine the overall significance of the tool.

##### **4.5.1.1 Perceived usefulness as a consequence leading to adoption of agency banking by micro, small and medium sized enterprises in Nairobi County.**

In the regression model, agency-banking adoption was the dependent variable and perceived usefulness the independent variable. Table 4.9 outlines the standard error of estimate, coefficient of determination, correlation coefficient and adjusted  $R^2$ . coefficient of correlation ( $R$ ), Coefficient of determination ( $R^2$ ), Adjusted  $R^2$  and standard error of the estimate. The R-value explains what percentage of the model can be described by the data. In this case, 55.4% of the data can be used to explain the model.  $R^2$  is used to explain the percentage of the independent variables that can be used to explain the dependent variable. In this case 30.7% of Perceived usefulness can be used to explain agency-banking adoption and the rest ( $100-30.7=69.3\%$ ) is due to unexplained variations. Adjusted  $R^2$  is an extension of the  $R^2$  and it is used to take care of the number of independent variables in the model.

**Table 4.9 Effect of Perceived Usefulness**

<b>Model Summary</b>				
<b>Model</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>Adjusted R<sup>2</sup></b>	<b>Std. Error of the Estimate</b>
<b>1</b>	.554 <sup>a</sup>	0.307	0.304	0.97341
<b>a. Predictors: (Constant), Perceived Usefulness</b>				

From Table 4.9, 30.7% of the model is explained by the independent variable. Analysis of variance (ANOVA) was used to test whether the percentage explained by the independent variables was statistically significant that is the overall implication of the model. The results showed that the model used in this study was significant at 1% significance level (F value = 95.507, p value = 0.000 < 0.01).

The regression coefficients as displayed in table 4.9 were analysed in order to establish whether the influence of the individual independent variables in the model and whether they are statistically significant. The t statistics and associated p value were examined and the decision rule was that, for a variable to be significant in explaining a dependent variable, the associated p value should be less than the critical p value which is set at 0.05 in this study. From the analysis, Perceived usefulness was statistically significant at 1% level of significance (T value = 9.875, p value = 0.000 < 0.01). This means a part increase in perceived usefulness would lead to growth in agency banking adoption by small and medium sized traders by 0.947units (appendix 6). Hence, the following model was fitted to show the relationship between agency banking adoption and perceived usefulness; *Agency Banking Adoption = -0.259 + 0.947 \* perceived usefulness*

Where; -0.259 is the constant term that is when there is no perceived usefulness; agency banking adoption will be -0.259. 0.947 = Coefficient of perceived usefulness factor. For every unit increase in perceived usefulness, we expect agency-banking adoption among small and medium sized traders to increase by 0.947(see appendix 8).

Given the fact that the model produced a coefficient of determination of 30.7%, the researcher sought to regress perceived usefulness with demographics to see whether the model would improve and the results indicated in appendix 7. Therefore, the results indicate a slight change in the  $R^2$  (37.5%) as well as the adjusted  $R^2$  (33.33%).

#### 4.5.1.2 Perceived risk as a consequence leading to adoption of agency banking among MSMEs in Nairobi County.

In the regression model used, agency-banking adoption was the dependent variable and perceived risk the independent variable. Table 4.10 outlines the standard error of estimate, coefficient of determination, correlation coefficient and adjusted  $R^2$ . The R-value explains what percentage of the model can be described by the data. In this case, 21.9% of the data can be used to explain the model.  $R^2$  is used to explain the percentage of the independent variables that can be used to explain the dependent variable. In this case, 4.8% of the Perceived risks can be used to explain agency-banking adoption and the rest (100-4.8=95.2%) is due to unexplained variations. Adjusted  $R^2$  is an extension of the  $R^2$  and it is used to take care of the number of independent variables in the model.

**Table 4.10 Effect of Perceived Risk**

Model Summary					
Model		R	R square	Adjusted R Square	Std. Error of the Estimate
	1	.219 <sup>a</sup>	0.048	0.044	1.13835
a. Predictors: (Constant), Perceived Risk					

From Table 4.10, 4.8% of the model is explained by the independent variable. Analysis of variance (ANOVA) was used to test whether the percentage explained by the independent variables is statistically significant that is the overall relevance of the model. The study findings

showed that the tool used in this study was significant at 1% significance level (F value = 11.187, p value = 0.001 < 0.01).

The regression coefficients were analysed in order to inform whether the influence of the individual independent variables in the model and whether they are statistically significant. The t statistics and associated p value were studied and the inference was that, for a variable to be relevant in explaining a dependent variable, the related p value should be less than the critical p value which is set at 0.05 in this study.

From the findings, Perceived risks was statistically relevant at 1% level of significance (T value = 3.345, p value = 0.001 < 0.01). This means a part increase in perceived risks would spool over to amplified use in agency banking adoption by small and medium sized traders by 0.320 units (appendix 6).

Hence, the following model was fitted to show the link between perceived risk and adoption of agency banking; ***Agency Banking Adoption = 1.757 + 0.320 \* perceived risks***

Where; 1.757 is the constant term that is when there is no perceived risks; agency banking adoption will be 1.757 and 0.320 = Coefficient of perceived risks factor. For every unit increase in perceived risks, we expect agency-banking adoption among small and medium sized traders to increase by 0.320 (see appendix 8).

Given the fact that the model produced an adjusted R<sup>2</sup> of 4.4%, the researcher sought to regress perceived usefulness with demographics to see whether the model would improve and the results indicated in appendix 7. Therefore, the results indicate a slight change in the adjusted R<sup>2</sup> (8.5%).

#### **4.5.1.3 Perceived ease of use as a consequence leading to adoption Agency Banking by MSMEs in Nairobi County.**

In this regression model, agency-banking adoption was the dependent variable and perceived ease of use as independent variable. Table 4.11 outlines the standard error of estimate, coefficient of determination, correlation coefficient and adjusted R<sup>2</sup>. The R-value explains what percentage of the model can be described by the data. In this case, 39.6% of the data can be used to explain the model. R<sup>2</sup> was used to explain the percentage of the independent variables that can be used to

explain the dependent variable. In this case, 15.7% of the Perceived ease of use can be associated with agency banking adoption and the rest (100-15.7=84.3%) is due to unexplained variations. Adjusted  $R^2$  as an extension of the  $R^2$  and was used to take care of the number of independent variables in the model.

**Table 4.11 Effect of Perceived Ease of Use**

<i>Model Summary</i>				
<i>Model</i>	<i>R</i>	<i>R<sup>2</sup></i>	<i>Adjusted R<sup>2</sup></i>	<i>Std. Error of the Estimate</i>
<i>1</i>	.396 <sup>a</sup>	0.157	0.153	1.07150
<i>a. Predictors: (Constant), Perceived Ease of Use</i>				

From Table 4.11, 15.7% of the model is described by the independent variable. Analysis of variance (ANOVA) was used to test whether the percentage described by the independent variables is statistically significant that is the overall significance of the model. The study findings show that the model used in this study was significant. The regression coefficients were analysed in order to establish whether the influence of the individual independent variables in the model and whether they are statistically significant. The t statistics and associated p value were examined and the decision rule was that, for a variable to be substantial in explaining a dependent variable, the associated p value should be less than the critical p value which is set at 0.05 in this study.

From the findings, Perceived ease of use was statistically significant at 1% level of significance (T value = 6.408, p value = 0.001 < 0.01). This means a unit increase in perceived ease of use would lead to increase in agency banking adoption by small and medium sized traders by 0.603 units (appendix 6).

Hence, the following model was fitted to show the relationship between; perceived ease of use and agency banking; ***Agency Banking Adoption = 0.832 + 0.603 \* perceived ease of use***

Where; 0.832 is the constant term that is when there is no perceived ease of use; agency banking adoption will be 0.832. Moreover, 0.603 = Coefficient of perceived ease of use factor. For every unit rise in perceived ease of use, agency banking uptake among small and medium sized traders

is expected to increase by 0.603 (see appendix 8).

Given the fact that the model produced an adjusted  $R^2$  of 15.3%, the researcher sought to regress perceived usefulness with demographics to see whether the model would improve and the results indicated in appendix 7. Therefore, the results indicate a slight change in the adjusted  $R^2$  (21.4%).

#### 4.5.1.4 Social Influence as a consequence leading to adoption of agency banking by MSMEs in Nairobi County.

In this regression model, agency banking adoption was the dependent variable and social influence the independent variable.

Table 4.12 presents the standard error of estimate, coefficient of determination, correlation coefficient and adjusted  $R^2$ . The R-value explains what percentage of the model can be described by the data. In this case, 44.4% of the data can be used to explain the model.  $R^2$  was used to explain the percentage of the independent variable that could explain the dependent variable. In this case, 19.7% of social influence can be used to explain agency-banking adoption and the rest ( $100-19.7=80.3\%$ ) is due to unexplained variations. Adjusted  $R^2$  as an extension of the  $R^2$  was used to take care of the number of independent variables in the model.

**Table 4.12 Effect of Social Influence**

<i>Model Summary</i>				
<i>Model</i>	<i>R</i>	<i>R<sup>2</sup></i>	<i>Adjusted R<sup>2</sup></i>	<i>Std. Error of the Estimate</i>
<i>1</i>	.444 <sup>a</sup>	0.197	0.193	1.04552
<i>a. Predictors: (Constant), Social Influence</i>				

From Table 4.12, 19.7% of the model is explained by the independent variable. Analysis of variance (ANOVA) was implemented to test whether the percentage explained by the independent variables is statistically significant that is the overall significance of the model. The study findings showed that the model used in this study was significant. The regression

coefficients were analyzed in order to establish whether there was influence of the individual independent variables in the model and whether they were statistically significant. The t statistics and associated p value were examined and the decision rule was that, for a variable to be effective in explaining a dependent variable, the associated p value should be less than the critical p value which is set at 0.05 in this study.

Social influence was statistically significant at 1% level of significance (T value = 7.365, p value = 0.000 < 0.01). This means a unit increase in social influence would lead to increase in agency banking adoption by small and medium sized traders by 0.751 units (appendix 6).

Hence, the following model was fitted to show the relationship between social influence and agency banking adoption; ***Agency Banking Adoption = 0.113 + 0.751 \* social influence***

Where; 0.113 is the constant term that is when there is no social influence; agency-banking adoption will be 0.113. Moreover, 0.751 = Coefficient of social influence factor. For every unit increase in social influence, we expect agency-banking adoption among small and medium sized traders to increase by 0.751 (see appendix 8). Given the fact that the model produced an adjusted R<sup>2</sup> of 19.3%, the researcher sought to regress perceived usefulness with demographics to see whether the model would improve and the results indicated in appendix 7. Therefore, the results indicate a slight change in the adjusted R<sup>2</sup> (21.8%).

#### **4.5.1.6 Overall regression model**

A combined regression analysis was conducted to show how the independent variables (Perceived Usefulness, Perceived Risk, Perceived Ease of Use and Social Influence) explain Agency banking adoption. The model summary result in Table 4.13 indicates that a sizeable proportion of the variance in adoption of agency banking was attributed to Perceived Usefulness, Perceived Risk, Perceived Ease of Use and Social Influence. The study found that Perceived Usefulness, Perceived Risk, Perceived Ease of Use and Social Influence explained 36.2% of the adoption of agency banking. This is as shown by the R squared of 0.362. Therefore, (1-0.362) 63.8% represents other factors not considered in the model represent.



**Table 4.13 Regression Model Summary.*****Model Summary<sup>b</sup>***

<i>Model</i>	<i>R</i>	<i>R<sup>2</sup></i>	<i>Adjusted R<sup>2</sup></i>	<i>Std. Error of the Estimate</i>	<i>Change Statistics</i>					<i>Durbin-Watson</i>
					<i>R<sup>2</sup> Change</i>	<i>F Change</i>	<i>df 1</i>	<i>df2</i>	<i>Sig.F Change</i>	
<i>1</i>	.601 <sup>a</sup>	0.362	0.350	0.94074	0.362	30.735	4	209	0.000	1.869

*a. Predictors: (Constant), Social Influence, Perceived Risk, Perceived Usefulness, Perceived Ease of Use*

*b. Dependent Variable: Agency Banking Adoption*

The study findings concluded that the model used in this study was relevant. The regression coefficients were analysed in order to establish whether the influence of the individual independent variables in the model and whether they are statistically significant. The t statistics and associated p value were examined and the decision rule was that, for a variable to be relevant in explaining a dependent variable, the associated p value should be less than the critical p value which is set at 0.05 in this study.

The statistic under usefulness showed a positive and relevant impact on agency banking adoption ( $\beta = 0.696$ ,  $t = 6.35$ ,  $p = .000 < 1.01$ ). This means that if usefulness was increased by one unit, agency banking adoption would increase by 0.696. Nonetheless, ease of use equally had a positive and significant effect on agency banking adoption ( $\beta = 0.197$ ,  $t = 1.816$ ,  $p = .071 < 0.1$ ). This meant that one unit increase in ease of use would lead to increase in agency banking adoption by 0.197. Moreover, perceived risk was not statistically significant ( $\beta = 0.015$ ,  $t = 0.159$ ,  $p = .874 > 0.05$ ). Lastly, social influence had a positive significant influence on agency banking adoption ( $\beta = 0.0314$ ,  $t = 2.816$ ,  $p = .005 < 0.01$ ). This meant that a part increase in social influence among respondents would lead to increase adoption of agency banking by 0.314 units. Hence, the following model was used to show the relationship;

***Agency Banking Adoption = -1.276 + 0.696 \* Perceived Usefulness + 0.197 \* Perceived Ease of Use + 0.314 \* social influence***

-1.276 represents the constant term meaning the value of agency banking adoption when the independent variables are zero; 0.696 is the regression coefficient which signifies that for every unit increase in usefulness, agency banking adoption among MSMEs will increase by 0.696, all other factors being constant. 0.197 is the regression coefficient that brings out the aspect of ease of use explaining that for every part rise in ease of use, agency banking adoption among MSMEs will increase by 0.197 holding all other factors constant. 0.314 depicts the element of social influence concluding that for every unit increase in social influence, agency banking adoption among MSMEs agency banking adoption will increase by increase by 0.314 holding all other factors constant (see appendix 8). Since the overall model came up with an adjusted  $R^2$  of 35%, the researcher sought to regress perceived usefulness with demographics to see whether the model would improve and the results indicated in appendix 7. Therefore, the results indicate a slight change in the adjusted  $R^2$  (38.1%).

#### 4.6 Summary of the Regression models

From the overall regression model above presents a summary of the significant and strength in variables in the models regressed.

**Table 4.14 Summary of results**

<i>Dependent Variable: Agency Banking Adoption</i>	
<b><i>Independent Variables</i></b>	
<i>Perceived Usefulness</i>	Relevant and strong
<i>Perceived Risk</i>	Relevant and weak
<i>Perceived Ease of Use</i>	Relevant and moderate
<i>Social Influence</i>	Relevant and strong

**Source, Author (2019).**

#### 4.7 Conclusion

This chapter elaborated how data was analysed in order to meet the research objectives, which were to analyse the how Perceived Usefulness, Perceived Risk, Perceived Ease of Use and Social Influence in the adoption of agency banking among MSMEs in Nairobi County.

Descriptives scrutinised standard deviation and mean while with linear regression and correlation, the study sought to bring out the relationships that exist among the dependent variable and independent variables. The result proved significant and positive relationship between ease of use, perceived risk, perceived influence and social influence on adoption of agency banking. With perceived usefulness and social influence standing out as major influencers of uptake of agency banking among MSMEs in Nairobi County.



## **CHAPTER FIVE: DISCUSSIONS CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

From the study objectives illustrated in chapter one, the purpose of the study was to come up with solutions that would answer the question on what issues if looked at would increase the acceptance of the idea of Agency banking among MSMEs in Nairobi County. The study used Gikomba Market as a case study. Chapter five brings out the results of the findings, debates, conclusions and recommendations. 5.2 looks at the discussions of the findings; 5.3 concludes the findings; 5.4 gives recommendations; while 5.6 advices on further areas of research.

### **5.2 Discussions**

The study was carried out in order to establish what elements if factored in can positively allure MSMEs in Nairobi County to embrace agency banking. The discussion below supervenes based on trend and significance of the respective factors on adoption of agency banking. In summary there was a consensance among the respondents on what agency banking is and whether it is relevant. This was supported with the fact that the mean was 3.3.

#### **5.2.1 Ease of Use of Agency Banking**

With an average mean of 3.3 and strong positive relationship between ease of use and agency banking as a concept ( $R^2=0.157$ ), one can conclude that respondents agreed with simplicity as a feature that would allure one to embrace agency banking. Moreover, a strong positive relationship was shown illustrated to show how adoption of agency banking and simplicity correlate. The correlation coefficient was statistically relevant at 5% level given a p value of 0.001. This means that ease of use had a substantial influence on adoption of agency banking. Technology for it to be accepted looks at user interfaces that are meant to ensure simplicity as a factor that will positively influence user interaction (Davis, 1989). The simpler it is relate with technology, the more suitable it becomes to consumers. The discoveries of this study did coincide with those of Curran & Meuter, (2005) which showed an affirmative correlation between simplicity and intent of consuming technology.

### **5.2.2 Perceived usefulness of Agency Banking**

One is allured to consider relevance in improving an existing system. This means that the technology must add on to the existing functions of the existing technology for it to be given consideration. Usefulness in this study gave a mean of 3.26 and a correlation coefficient of 0.307, which showed significance at 5% ;level of significance. Therefore, the findings did conclude that handiness of technology is important as it influences the decision of adoption in this case, adoption of agency banking among MSMEs in Nairobi County.

Handiness gives a strong impact on use of technology (Venkatesh and Davis ,2002). Conclusions from this study demonstrate an affirmative effect on adoption of agency banking among MSMEs in Nairobi. Rogers (2003) and Hanafizadeh et al., (2014) concluded that perceived usefulness had a positive and relevant outcome on both attitude and usage intention toward use of portable services.

### **5.2.3 Perceived Risk and Agency Banking**

Agency banking as a tool that seeks to bring finances to the consumer can incur elements or threats which can be summarised as risks. These include but are not limited to the controls both physically and technically when it comes to agency banking. Compared to the traditional banks where guards are on high alert as well as items such as cash are under lock and key with dual locks, it is important to re-affirm the consumer that the same security applies to the agents. The study gave an overall mean of 3.33, which indicates that MSMEs see agency banking as a risky venture. The feedback did not show variation, this is evident following a standard deviation of 1.12. Hence a weak relationship was established which in a nut shell elaborates that perceived risk if not managed could melt down to possible decline on uptake of agency banking among MSMEs in Nairobi County. Risk is obtained through doubt judged by physical appearance as well as the service received at the agent outlet. Consumers need to feel that the information they transmit is safe and will be protected. Some of the respondents revere the agents as they see the locations being too open and fear the literacy levels of the agents can result to loss of important information. Coursaris et al. (2003) stipulated perceived risk as being more likely to relate negatively to adoption.

#### **5.2.4 Effect on the customer's social influence**

Image influences appearance which equally leads to a particular perception laid on the individual in society. Human beings are always looking for validation. With validation comes recommendation and with recommendation comes adoption. This means that the effect of the customers' social influence and adoption of agency banking among MSMEs in Nairobi County, related with factors such as the opinions of friends, parents, relatives to the customers' likelihood to adopt and use agency facilities. The study established the overall mean for all the items regarding the effect on the customers' social influence to be 3.61, implying that majority of the respondents agreed with the outlined objects.

Agents are located in open spaces where anyone can access the facility. Discussions on agency banking can find their way in social halls, places of worship as well as schools. These discussions when discussed among members of the society can positively engage the discussion around agency banking which can influence adoption. Skog (2012) concluded that ones' image can be improved when he/she uses technology meaning there is existence of positivity.

#### **5.3 Conclusions**

An analysis of the objects under study were reviewed in a bid to determine the relationship existing between the independent variables and the adoption of agency banking after which conclusions were deduced. With regards to adoption of agency banking among MSMEs in Nairobi County, it can be concluded that given the overall mean, respondents had an idea and concurred with what agency banking is meant to accomplish. Moreover, there was a strong agreement that perceived usefulness affects adoption of agency banking.

Furthermore, perceived ease of use was equally deduced as a factor that can explain adoption of agency banking. Perceived risk, although significant had a weak correlation with uptake of agency banking. This indicates that it does not necessarily explain adoption of agency banking since there existed variations. Lastly, elements of social influence resonated positively with the respondents given the computed mean.

Hence, handiness and societal consent were outstanding elements with significant influence on adoption of agency banking among MSMEs in Nairobi County. The research applauds focus on the elements that define handiness and societal recognition.

## 5.4 Recommendations

Conclusions prelude that innovations in technology have transformed the banking industry. This fragment presents both useful suggestions amidst hypothetical suggestions with respect to the inferences obtained while analysing the link between receptions of agency banking.

Recommendations were informed by the two outstanding elements, that is, perceived usefulness and social influence. Financial institutions are advised to guarantee the following; access to account details, availability of mini-statements; availability of a platform that supports payment of bills and transfer of funds as well as access to loan products. By doing so, the efforts by commercial banks will draw the enterprises closer and facilitate financial inclusion. Vis a Vis expansion of financing options.

Moreover, it's of importance to warrant that the tool cuts across geographic locations, so that the traders can equally send money to their relatives and suppliers who do not live in Nairobi County. Advertising should boost the urge of association making it seem like transacting at the agency improves ones' self-image and influences prestige. Hence, this study goes against that of Kithuka (2012) that concluded distance was a non-factor. From the respondents, aside from agents existing countywide, there needs to be visible presence. They argue that unlike MPESA, it is difficult to locate an agent.

Lastly, the technology should lure people from different segments through specialized products that define a particular age set or social status. This will go a long way in using peer pressure to allure more consumers. Expertise equally stands out; the banks have a task to convince the traders that the agents are sufficiently trained. Perhaps inclusion of flyers about the bank or a certificate showing one as being a licensed agent will create an element of trust between the traders and agents.

Furthermore, there is need to sensitize the public on the opportunities that come with having a bank account. The end destination of funds through agency banking is an account and when people do not have an account to start with, it will be difficult to sell the idea of convenience. Moreover, most of the respondents complained of lack of convenient marketing strategies to entice them in this venture. Given the nature of their businesses, it is hard to set aside time to visit a particular stand in order to acquire information. Hence, table marketing was recommended as the trader can continue with business while getting one on one information on the existence of

agency banking.

Of key interest in the findings is that the business people in Gikomba Market are sceptical about the agency-banking model. They argue that banking is considered for those who have a lot of money; hence, people shy away if they think their money is not enough to be held in a bank. Furthermore, some do not trust the agents as they think they are unprofessional and lack adequate knowledge pertaining the respective banks they represent. Hence, attitude and lack of knowledge from the agents seems to be a setback in adoption of agency banking. When there is no adequate and prompt answer when questions are asked, this leads to immediate dismissal of a particular system as consumers will be sceptical on its legitimacy. Hence, the agents need to know their trade in order to assist in marketing of the technology.

Issues of float were still regarded as hindrance in adopting the technology as well as inadequate information of what the technology is about. Interestingly, there are those who linked their lack of adoption to the etiquette of the agents. They linked lack of business etiquette as their reason from shying away from the same. Hence a conclusion can be made as that of Mwangi (2012) that there needs to be a criteria of selecting agents. Others link unavailability of loan products as a reason for lack of adoption whereas there are those who believe that banking should be left to the known structures, agency banking as a whole should be abolished and increased flexible hours should be offered by bank branches.

### **5.5 Limitations of the study**

The population was focused on Gikomba Market, Nairobi County. Aside from being in Gikomba only, the population was not complete because the market has been experiencing fires, which implies that there could be more businesses that could have formed the population under study. Moreover, licenses are issued on a yearly basis, businesses keep closing, and opening hence, it is hard to establish the actual population.

The theories under study informed the objectives under study and limited the objectives to perceived ease of use of, perceived usefulness of, perceived risk and social influence as reasons that influence the adoption of agency banking omitting other factors that were not analysed.



### 5.6 Areas for further study

This study focused on launching factors persuading MSMEs to take up agency banking but was restricted to Gikomba in Nairobi County. A comparable study is essential factoring all MSMEs in Nairobi County who amount to 1,050,600 to give a clear and precise estimate of whether the aspects outlined in the study influence adoption of agency banking and if not, what other factors stand out in explaining the adoption of agency banking.

Moreover, a study needs to be done to illustrate the actual target market for the agency banking technology and whether the concept is viable to the target market, as there seems to be confusion on the actual intent of agency banking technology. There is a debate on whether the technology was actually thought out or whether it was a competitive strategy targeting the boom that was experienced in 2007.



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## **Appendix I: Introduction Letter.**

**Title of Research:**                      **An analysis of the factors influencing adoption of Agency Banking among MSMEs in Nairobi County.**

**Participant,**

Dear Sir/Madam,

### **REF: RESEARCH QUESTIONNAIRE**

I am a graduate student at Strathmore University pursuing Master in Commerce (MCOM). I am conducting a research on the factors that affect the adoption of agency banking in Nairobi County in partial fulfilment of a master's degree. My study uses Micro, Small and Medium enterprises as a case study.

Your participation in this research project is completely voluntary. There are no known risks to participation beyond those encountered in everyday life. Your response will remain confidential and anonymous. Data from this research will be kept under lock and key and reported only as a collective combined total. No one other than the researcher will know your individual answers to this questionnaire.

Thank you for your participation in this important study

**Yours faithfully,**

**Joyce Emmah Nabwire Mukhule.**



## Appendix II: Questionnaire

My name is Joyce Emmah Nabwire Mukhule, a student at the Strathmore Business School. I am carrying a research on “Factors that influence the adoption of agency banking among micro, small and medium sized enterprises in Nairobi County”. You have been chosen as one of the respondents to the questions below towards the establishment of the research objective. Responses to these questions will be treated with outmost confidentiality.

*Instructions: Please give answers in the spaces provided and tick ( ☐ ) or fill in the required information in the box that matches your response to the questions where applicable.*

### SECTION A: Demographic Characteristics of Respondents.

1. Please indicate your gender

Male ☐

Female ☐

2. Indicate your age bracket. (Tick one)

Below 18 years ☐

18-29 ☐

30-41 ☐

42-53 ☐

54-65 ☐

66 years and above. ☐

3. What is your highest educational qualification? (Tick one)

Primary ☐

Secondary ☐

University ☐  
Tertiary/Polytechnic ☐  
None ☐

4. State your marital status. (Tick one or Specify)

Single ☐  
Married ☐  
Divorced ☐  
Other. (Specify) \_\_\_\_\_

5. For how many years have you traded in Gikomba market? (Tick one)

0-3 years ☐ 4-6 years ☐  
7-9 ☐ Over 10 years ☐

6. Do you have a bank Account? Yes ( ☐ ) No ( ☐ ).

6.a. If yes, does your bank have an agency outlet? Yes ( ☐ ) No ( ☐ ) I do not know ( ☐ )

7. How likely are you to use Agent Banking again in the near future?

Never ☐ Rarely ☐  
Often ☐ Very often ☐

## **SECTION B: Determinants of Agency Banking Adoption**

### **Factor One: Perceived Usefulness of Agency Banking (number of items=8)**

8. To what extent do you feel that transacting through an agent improves your business activities?

Not at all ☐ Low Extent ☐  
Moderately ☐ High Extent ☐

Very High Extent [ ]

Below are some of the beneficial uses or perceived usefulness that is associated with use of Agency Banking agency banking. In a scale of 1 – 5 as shown in the scale below, please indicate the extent to which you have adopted agency banking because of the same;

Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Agree (1)
I am able to check my account details					
I am able to view mini-statements					
I am able to pay bills for government services and public utilities.					
I am able to transfer funds between bank accounts					
I am able to pay credit cards or loans.					
I am able to access real-time services compared with traditional banking services.					
Agency banking has improved the way I design my personal financial services.					
Agency banking has reduced the cost of banking services.					

Any other: -----  
-----  
-----

**Factor two: Perceived Risks in Adoption of Agency Banking.**

9. To what extent do you feel that transacting through an agent presents risks to your business activities?

Not at all                    ☐                    Low Extent                    ☐  
 Moderately                    ☐                    High Extent                    ☐  
 Very High Extent                    ☐

Below are several statements on perceived risks for transacting in an agent bank outlet. Please indicate the extent to which you agree with each of the statement.

(Number of items=5)

Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
Overall, the agency banking is a safe place to transmit sensitive information					
The agency banking is a secure means through which to send sensitive information.					
I would feel secure sending sensitive information across the Agency Banking.					
There is minimal technology failure to deliver its anticipated outcome and its consequent loss is also negligible.					
The fear of losing PIN code/passwords is also minimal as well as the threat of hacking.					

Any other: -----  
 -----  
 -----

**Factor three: Perceived ease of use when interacting with Agency Banking (number of items=5)**

Please indicate one choice for each of the following statements

**Table II: Perceived ease of use of agency banking**

Statement	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
The interaction with the agency financial services is clear and understandable.					
The interaction with agency financial service does not require a lot of mental effort.					
I find it easy to get agency financial service to do what I want it to do.					
I find the agency payment procedure to be flexible to interact with.					
The interaction with the agency financial services is clear and understandable.					

Any other: -----  
 -----  
 -----  
 -----  
 -----

**Factor four: Effect on the customer's social influence on Agency Banking (Number of Items = 4)**

<b>Statement</b>	<b>Strongly Agree (5)</b>	<b>Agree (4)</b>	<b>Neutral (3)</b>	<b>Disagree (2)</b>	<b>Strongly Disagree (1)</b>
<b>I use Agency Banking because my friends/family/business partners use agency banking.</b>					
<b>By using agency banking, it improves my self-image.</b>					
<b>By using a agency phone, it improves my personal prestige.</b>					
<b>By using agency banking, it makes me look trendy among my peers.</b>					
<b>People who use agency payment services are experts in information technology.</b>					

What suggestions can you make to improve on the services?

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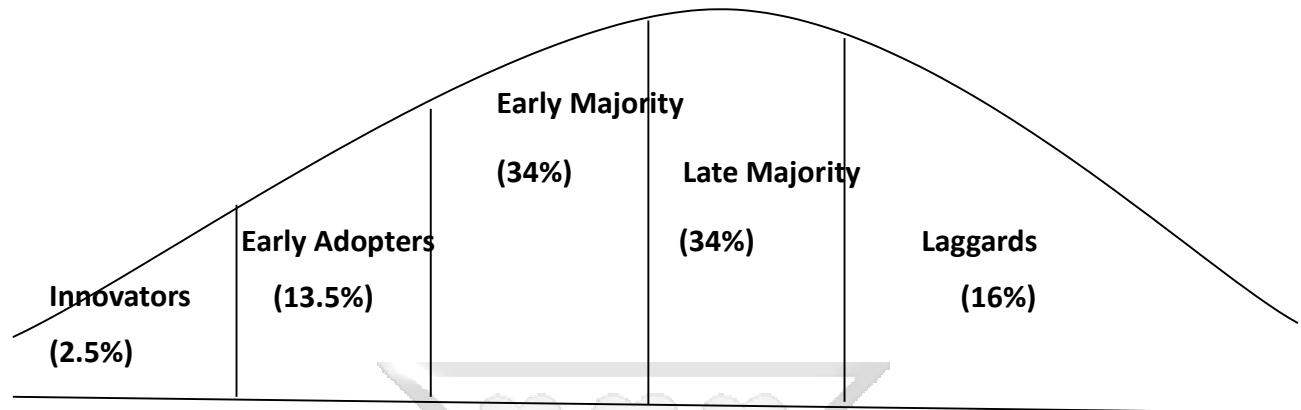
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**Thank you for your participation**

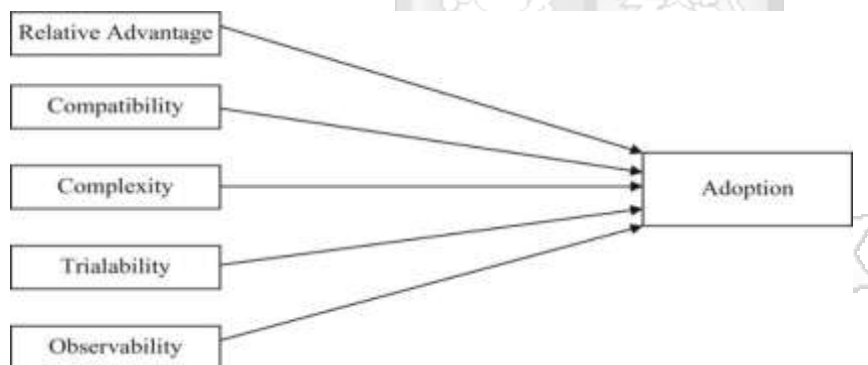


### Appendix III: List of Figures

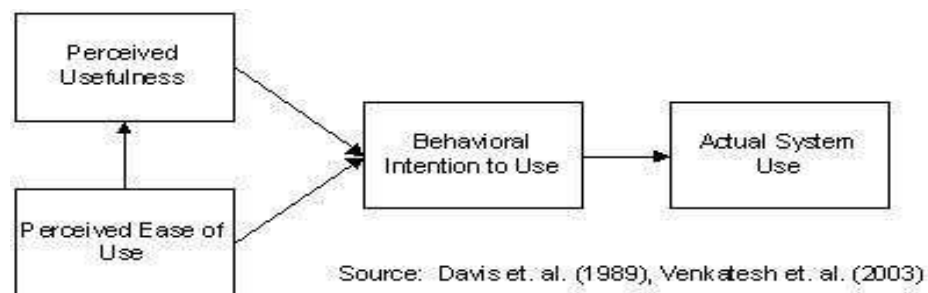
**Figure 2: Stages of adoption in the DOI theory.** *Source: Boston University School of Public Health 1972*



**Figure 3. Diffusion of Innovations Theory.** *Source: Rogers (1983)*



**Figure 4. Technology Acceptance Model**





## Appendix IV: Diagnostic Tests Output

### 1. Test for Heteroscedasticity

Heteroscedasticity refers to situations where the variance is not constant which violates the assumptions of the error term. Lagrange Multiplier is used to test for the heteroscedasticity. It is calculated using  $R^2$  from the auxiliary regression and multiplying it by the number of observations, that is,  $LM \sim \chi^2(n)$  where  $n$  is the number of regressors in the auxiliary regression

**Table 4.15 Lagrange Multiplier**

<i>Model</i>	<i>R<sup>2</sup></i>	<i>No. of observations</i>	<i>LM</i>	<i>Tabulated value (<math>\chi^2</math>) at 5%</i>
<b>1</b>	0.3071	209	68.176	(1, 0.05) = 2.71
<b>2</b>	0.0482	209	10.744	(1, 0.05) = 2.71
<b>3</b>	0.1567	209	34.943	(1, 0.05) = 2.71
<b>4</b>	0.1971	209	43.950	(1, 0.05) = 2.71
<b>Overall</b>	0.3617	209	80.287	(4, 0.05) = 9.49

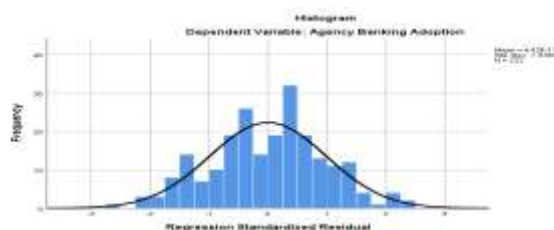
*From the table above, the LM values are greater than Chi square tabulated values hence we fail to reject the null meaning the variance is constant.*

### 2. Test for Normality

A histogram was used to check for normality by having a normality curve drawn on the histogram. If the histogram is well covered by the normality, density curve it implies the data is normal. From the table below, the histogram is well curved with Q-Q plot implying that the data is normal. Also the normal P-P plot shows that the variable has a normal distribution since it falls along the straight line.

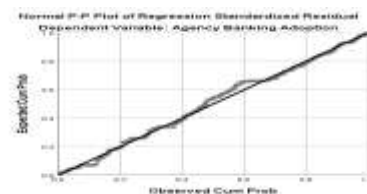
*H0: There is no autocorrelation*

*H1: There is autocorrelation*



el

1.1



**Table 4.16 Durbin Watson Test for Autocorrelation**

Model Summary <sup>b</sup>	
Model	Durbin-Watson
1	1.869
a. Predictors: (Constant), Social Influence, Perceived Risk, Perceived Usefulness, Perceived Ease of Use	
b. Dependent Variable: Agency Banking Adoption	

#### 4. Test for Multicollinearity

Multi-collinearity refers to situations where there is high correlation between independent variables in our model, which results in high coefficient of determination. Variance inflation factor (VIF) was used to test whether presence of multicollinearity is statistically significant. The table below provides the Results of the Multicollinearity Check Using Tolerance and VIFs.

**Table 4.17 VIF and Tolerance level.**

Coefficients			
Model		Co linearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Perceived Usefulness	0.715	1.398
	Perceived Risk	0.728	1.373
	Perceived Ease of Use	0.580	1.723
	Social Influence	0.679	1.472
a. Dependent Variable: Agency Banking Adoption			

## Appendix VI: ANOVA (Analysis of Variance)

### ANOVA: Perceived Usefulness

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	92.390	1	92.390	97.507	.000 <sup>b</sup>
	Residual	208.456	220	0.948		
	Total	300.847	221			
a. Dependent Variable: Agency Banking Adoption						
b. Predictors: (Constant), Perceived Usefulness						

### ANOVA: Perceived Ease of Use

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.147	1	47.147	41.065	.000 <sup>b</sup>
	Residual	253.732	221	1.148		
	Total	300.878	222			
a. Dependent Variable: Agency Banking Adoption						
b. Predictors: (Constant), Perceived Ease of Use						

### ANOVA: Perceived Risk

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.496	1	14.496	11.187	.001 <sup>b</sup>
	Residual	286.382	221	1.296		
	Total	300.878	222			
a. Dependent Variable: Agency Banking Adoption						
b. Predictors: (Constant), Perceived Risk						

### ANOVA: Social Influence

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	59.299	1	59.299	54.248	.000 <sup>b</sup>
	Residual	241.579	221	1.093		
	Total	300.878	222			
a. Dependent Variable: Agency Banking Adoption						
b. Predictors: (Constant), Social Influence						

## Appendix VII: Multiple Regressions to improve model results

From the outputs illustrated below, the conclusion, which can be deduced, is that there was minimal change in the output of the adjusted  $R^2$  after conducting a multiple regression with the demographics. Perceived usefulness increased from 30.4% to 33.33%; perceived ease of use from 15.3% to 21.4%; perceived risk from 4.4% to 8.8% and lastly social influence from 19.3% to 21.8%. This means that perceived usefulness and social influence had the highest increase in percentage respectively. As for the overall model, the increase was equally slight with the  $R^2$  increasing from 35% to 38.1%.

### Output on Perceived Usefulness

Model Summary <sup>c</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.554 <sup>a</sup>	0.307	0.304	0.97341	0.307	97.507	1	209	0.000	
2	.612 <sup>b</sup>	0.375	0.333	0.95297	0.068	1.734	13	207	0.056	1.824

a. Predictors: (Constant), Perceived Usefulness

b. Predictors: (Constant), Perceived Usefulness, 4-6 years, 59-63, 54-58, 39-43, 34-38, 29-33, University, Tertiary/Polytechnic, Primary, 49-53, Over 10 years, 7-9 years, None

c. Dependent Variable: Agency Banking Adoption

### Output on Perceived Ease of Use

Model Summary <sup>c</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.396 <sup>a</sup>	0.157	0.153	1.07150	0.157	41.065	1	209	0.000	
2	.514 <sup>b</sup>	0.264	0.214	1.03196	0.107	2.328	13	207	0.007	1.973

a. Dependent Variable: Agency Banking Adoption

b. Predictors: (Constant), Perceived Ease of Use

c. Predictors: (Constant), Perceived Ease of Use, 59-63, 54-58, 29-33, 34-38, University, 4-6 years, 39-43, Tertiary/Polytechnic, Primary, 49-53, Over 10 years, 7-9 years, None

### Output on Perceived Risk

Model Summary <sup>c</sup>										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.219 <sup>a</sup>	0.048	0.044	1.13835	0.048	11.187	1	209	0.001	
2	.378 <sup>b</sup>	0.143	0.085	1.11369	0.094	1.761	13	207	0.051	1.976

a. Predictors: (Constant), Perceived Risk

b. Predictors: (Constant), Perceived Risk, 7-9 years, 54-58, 34-38, Tertiary/Polytechnic, 29-33, 39-43, University, 59-63, 49-53, Over 10 years, Primary, 4-6 years, None

c. Dependent Variable: Agency Banking Adoption

### Output on Social Influence

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.444 <sup>a</sup>	0.197	0.193	1.04552	0.197	54.248	1	209	0.000	
2	.517 <sup>b</sup>	0.267	0.218	1.02958	0.070	1.531	13	207	0.108	1.950

a. Predictors: (Constant), Social Influence

b. Predictors: (Constant), Perceived Risk, 7-9 years, 54-58, 34-38, Tertiary/Polytechnic, 29-33, 39-43, University, 59-63, 49-53, Over 10 years, Primary, 4-6 years, None

c. Dependent Variable: Agency Banking Adoption

### Output for the Overall Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.601 <sup>a</sup>	0.362	0.350	0.94074	0.362	30.735	4	217	0.000	
2	.655 <sup>b</sup>	0.429	0.381	0.91800	0.067	1.837	13	204	0.040	1.860

a. Predictors: (Constant), Social Influence, Perceived Risk, Perceived Usefulness, Perceived Ease of Use

b. Predictors: (Constant), Social Influence, Perceived Risk, Perceived Usefulness, Perceived Ease of Use, 7-9 years, 54-58, 29-33, Tertiary/Polytechnic, 34-38, 59-63, University, 39-43, Over 10 years, 49-53, Primary, 4-6 years, None

c. Dependent Variable: Agency Banking Adoption

## Appendix VIII: Regression Coefficients

**Table illustrating Regression Coefficient-Perceived Usefulness**

Coefficients <sup>a</sup>					
Model		Un-standardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-0.259	0.319	-0.814	0.417
	Perceived Usefulness	0.947	0.096	9.875	0.000
a. Dependent Variable: Agency Banking Adoption					

**Table illustrating Regression Coefficient-Perceived Ease of Use**

Coefficients <sup>a</sup>					
Model		Un-standardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	0.832	0.319	2.608	0.010
	Perceived Ease of Use	0.603	0.094	6.408	0.000
a. Dependent Variable: Agency Banking Adoption					

**Table illustrating Regression Coefficient-Perceived Risk**

Coefficients <sup>a</sup>					
Model		Un-standardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	1.757	0.328	5.365	0.000
	Perceived Risk	0.320	0.096	3.345	0.001
a. Dependent Variable: Agency Banking Adoption					

**Table illustrating Regression Coefficient-Social Influence**

Coefficients <sup>a</sup>						
Model		Un-standardized Coefficients		t	Sig.	
		B	Std. Error			
1	(Constant)	0.113	0.375	0.301	0.763	
	Social Influence	0.751	0.102	7.365	0.000	
a. Dependent Variable: Agency Banking Adoption						

**Table illustrating Regression Coefficient-Overall Equation**

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		t	Sig.	Collinearity Statistics		
		B	Std. Error			Tolerance	VIF	
1	(Constant)	-1.276	0.408	-3.125	0.002			
	Perceived Usefulness	0.696	0.110	6.350	0.000	0.715	1.398	
	Perceived Risk	0.015	0.093	0.159	0.874	0.728	1.373	
	Perceived Ease of Use	0.197	0.108	1.816	0.071	0.580	1.723	
	Social Influence	0.314	0.111	2.816	0.005	0.679	1.472	
a. Dependent Variable: Agency Banking Adoption								

